

With the Board's Compliments.

THE  
FIFTY-SECOND ANNUAL REPORT  
OF THE  
BOARD OF MANAGEMENT  
OF THE  
ADELAIDE HOSPITAL,  
WITH A  
LIST OF SUBSCRIPTIONS, DONATIONS, ETC.,  
FOR 1921.

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ADELAIDE:

R. E. E. ROGERS, GOVERNMENT PRINTER, NORTH TERRACE

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1922.

## OFFICE BEARERS, 1921.

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### BOARD OF MANAGEMENT.

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### HOUSE COMMITTEE.

CHAIRMAN—DR. RICHARD SANDERS ROGERS, M.A., M.S., M.D. MRS. HELEN EDWARDS, J.P. MRS. ELIZABETH WEBB NICHOLLS, J.P.	THOMAS BODEN MERRY, J.P. FRANCIS WALTER LUNDIE, J.P.
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### MEDICAL COMMITTEE.

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### MEDICAL SUPERINTENDENT.

CHAS. T. TURNER, M.C., M.B., B.S.

### SECRETARY.

WILLIAM C. MEDLYN SUCCEEDED BY RICHARD JAMES CHAMPION, J.P.

### COLLECTOR AND INQUIRY OFFICER.

T. J. GARDINER, J.P.

### MATRON.

ELEANOR HARRALD.

### HOUSEKEEPER.

MRS. BESSIE MOORE.

## MEDICAL OFFICERS, 1921.

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### HONORARY CONSULTING MEDICAL AND SURGICAL STAFF.

#### *Physicians:*

RICHARD SANDERS ROGERS, M.A., M.S., M.D.  
SIR JOSEPH C. VERCO, K.B., M.D., F.R.C.S.  
WILLIAM T. HAYWARD, C.M.G., LL.D., L.K.Q.C.P., M.R.C.S., &c.  
HARRY SWIFT, M.D. CANTAB.; M.R.C.S., ENG.

#### *Surgeons:*

PROFESSOR ARCHIBALD WATSON, M.D., F.R.C.S.  
ARTHUR E. SHEPHERD, D.S.O., O.B.E., L.R.C.P. & S., EDIN.; L.F.P. & S.  
WILLIAM ANSTEY GILES, M.B., CH.M.  
JAS. A. G. HAMILTON, M.B., L.R.C.S.  
ARTHUR F. A. LYNCH, M.B., B.S.  
GEO. A. FISCHER, M.B., B.S.

#### *Bacteriologist:*

THOMAS BORTHWICK, M.B., CH.M.

#### *Radiologist:*

WILLIAM RAY, M.B., B.S., ADEL.

### HONORARY MEDICAL AND SURGICAL STAFF.

#### *Honorary Physicians:*

EDWARD ANGAS JOHNSON, M.D., CH.D., GOTTINGEN; M.R.C.S., ENG., L.R.C.P., LOND.  
C. T. C. DE CRESPIGNY, D.S.O., M.D., MELB.  
WILLIAM RAY, M.B., B.S., ADEL.  
FRANK S. HONE, M.B., B.S., ADEL.

#### *Honorary Surgeons:*

ARTHUR M. CUDMORE, M.B., B.S., ADEL.; F.R.C.S., ENG.  
W. R. CAVANAGH-MAINWARING, S.E., F.R.C.S., ENG., &c.  
HENRY SIMPSON NEWLAND, C.B.E., D.S.O., F.R.C.S., ENG., &c.

#### *Honorary Gynaecologists:*

T. G. WILSON, M.D., CH.M., SYDNEY; F.R.C.S., EDIN.

W. A. VERCO, M.B., B.S., ADEL.

#### *Honorary Gynaecologist Pre-Maternity Clinic:*

T. G. WILSON, M.D., CH.M., SYDNEY; F.R.C.S., ENG.

#### *Honorary Ophthalmologist:*

A. W. HILL, M.D., BRUX.; M.R.C.S., ENG.; L.R.C.P., LOND.  
H. F. SHORNEY, M.D., MELB.; F.R.C.S., ENG.

#### *Honorary Surgeon for Ear and Throat:*

HUBERT M. JAY, M.B., B.S., ADEL.

#### *Honorary Clinical Assistant Ear and Throat:*

WILLIAM C. SANGSTER, M.D., MELB.

#### *Honorary Dermatologist:*

ROWLAND E. HARROLD, M.B., CH.M., EDIN.

#### *Honorary Assistant Physician to Infectious Diseases Block:*

SAMUEL ROY BURSTON, C.B.E., D.S.O., M.B., B.S., SUCCEEDED BY  
ALBERT RAY SOUTHWOOD, M.D., ADEL.

#### *Honorary Assistant Physician to Neurology Department.*

H. KENNETH FRY, D.S.O., M.B., B.S.

#### *Honorary Pathologist:*

JOHN B. CLELAND, M.D., SYDNEY.

#### *Honorary Clinical Pathologist:*

DOUGLAS L. BARLOW, M.B., B.S.

*Honorary Radiologist:*

HARRY CAREW NOTT. M.B., B.S., ADEL.; D.M.R.E., CAMB.

*Honorary Assistant Physicians:*

J. WALTER BROWNE, M.B., CH.M., IREL. D'ARCY R. W. COWAN, M.B., B.S., ADEL.	SAMUEL ROY BURSTON, C.B.E., D.S.O., M.B., B.S.
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*Honorary Assistant Surgeon:*

BRONTE SMEATON, M.B., B.S., ADEL.; M.R.C.S., ENG.; L.R.C.P., LOND.
JOHN CORBIN, M.B., B.S., ADEL.
MALCOLM L. SCOTT, M.D., M.S., F.R.C.S.

*Honorary Assistant Gynaecologist:*

RUPERT E. MAGAREY, M.B., B.S., ADEL.	H. ARTHUR POWELL, C.M.G., M.B., B.S., ADEL.
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*Honorary Anæsthetists:*

G. ROY WEST, M.B., B.S., ADEL. GILBERT BROWN, M.B., CH.B., LIVERPOOL.	P. SANTO MESSENT, M.B., B.S., ADEL.
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*Medical Officers Night Clinic (Venereal Diseases):**Males:*

HAROLD RISCHBIETH, M.D., F.R.C.S., SUCCEEDED BY GLEN H. BURNELL, M.D., ADEL.

*Females:*

PHŒBE CHAPPLE, M.B., B.S., ADEL.

*Honorary Consulting Masseur:*

JOHN MILLIKIN, Esq., F.S.Sc.

*Resident Masseuse:*

ENO M. ASHTON.

**MEDICAL SUPERINTENDENT.**

CHAS. T. TURNER, M.C., M.B., B.S.

**RESIDENT MEDICAL OFFICERS.**

S. E. FRANCIS, M.B., B.S., MELB. F. R. HONE, M.B., B.S., ADEL. S. R. HECKER, M.B., B.S., ADEL., SUCCEEDED BY P. E. L. HUSSEY, M.B., B.S., ADEL. K. S. HETZEL, M.B., B.S., ADEL.	J. E. MAHON, M.B., B.S., MELB. W. E. STEVEN, M.B., B.S., ADEL. H. G. WALLACE, M.B., B.S., MELB. R. L. E. WALMSLEY, M.B., B.S., ADEL. B. E. WURM, M.B., B.S., ADEL. I. V. YOFFA, M.B., B.S., MELB.
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**DISPENSER.**

W. F. HAMMER, M.P.S.

**DENTAL OFFICERS.***Honorary Dental Surgeons:*

DR. THEO. SHANASY SUCCEEDED BY DR. L. W. TROTT. DR. P. RAY NEWLING.	DR. E. MILLHOUSE. DR. ARTHUR CHAPMAN. MR. F. M. SWAN.
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*Superintendent:*

DR. ARTHUR CHAPMAN.

*House Dental Surgeon:*

THOS. D. CAMPBELL.

## ADELAIDE HOSPITAL.

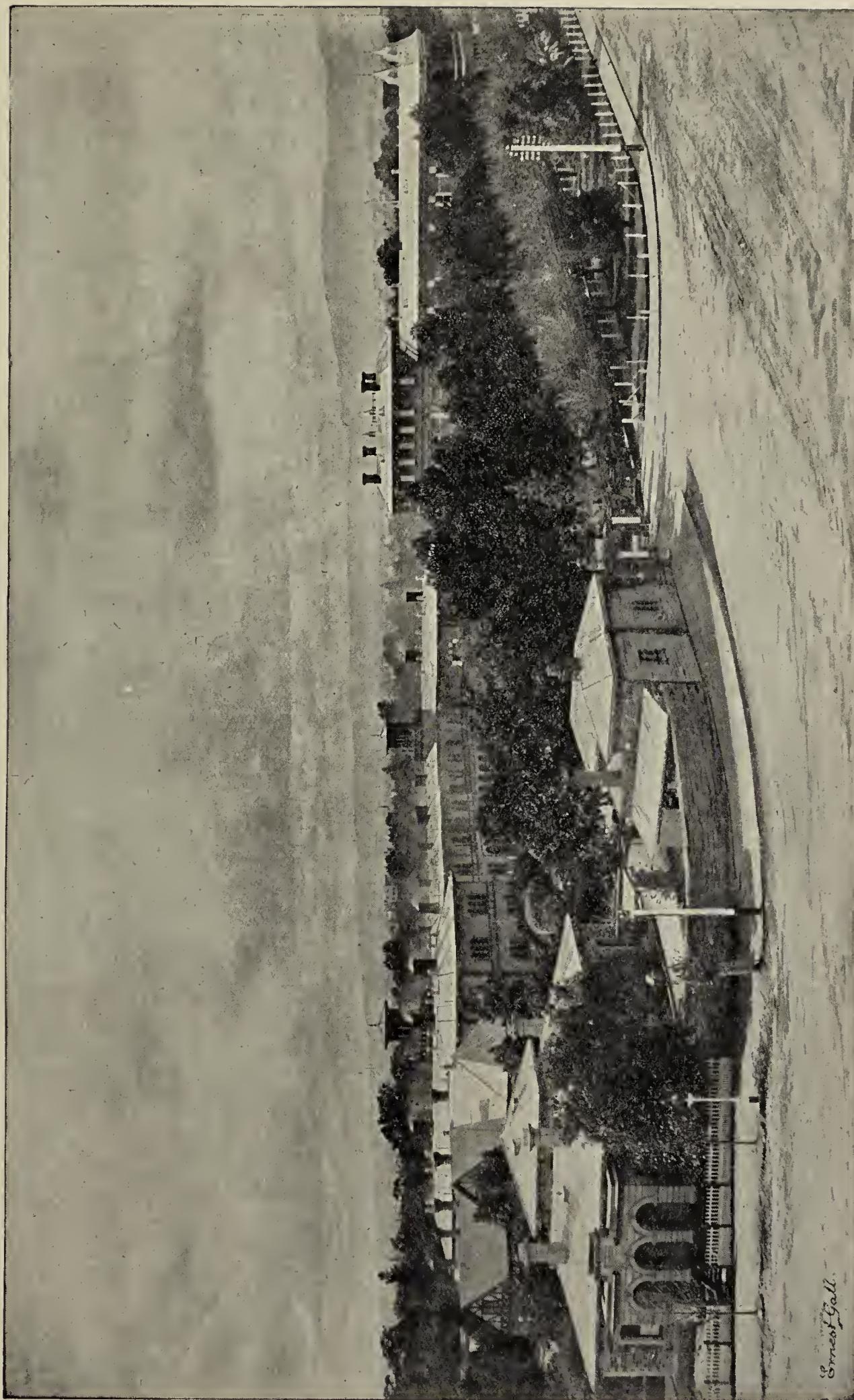
### Roll of Honor for Serving their King and Country in the Great War, 1914-18.

Earl, H., porter.	Hill, A. W., Dr., H.M.O.
Cliff, S., porter.	Poulton, B., Dr., H.M.O.
Draper, T. W., porter.	Todd, C. E., Dr., H.M.O.
Cavanagh-Mainwaring, Dr., H.M.O.	Johnson, E. A., Dr., H.M.O.
Newland, H. S., Dr., H.M.O.	Rinder, L., charge nurse.
Watson, A., Prof., H.M.O.	Kingsmill, E. M., charge nurse.
White, L. E., charge nurse.	Gurner, M. H., charge nurse.
Graham, M., matron.	Nelson, A., charge nurse.
Haynes, O. L., charge nurse.	Millikin, J., galvanist.
Hay, M., charge nurse.	Giles, W. A., Dr., H.M.O.
Peters, E. A., charge nurse.	Gault, A. H., Dr., H.M.O.
Shearer, A. C., charge nurse.	Harrold, R. E., Dr., H.M.O.
Burston, S. R., Dr., H.M.O.	Hone, F. S., Dr., H.M.O.
Deere, F. M., charge nurse.	Lynch, A. F., Dr., H.M.O.
Cunningham, A., charge nurse.	Shillabeer, J. M., charge nurse.
McManus, L. V., charge nurse.	Clark, H. M., charge nurse.
Medlyn, C., secretary.	Saunders, C. D., charge nurse.
Rodgers, M., charge nurse.	Reed, E. A., charge nurse.
McLean, C. G., charge nurse.	Davis, D., charge nurse.
Yeatman, C., Dr., medical superintendent.	Cherry E. J. S., charge nurse.
De Crespigny, C. T. C., Dr., H.M.O.	Simon, L. H., charge nurse.
Cudmore, A. M., Dr., H.M.O.	Haggard, V. C. D., charge nurse.
Williams, F. E., asst. laby.	Ransome, F., charge nurse.
Howitt, F. M., charge nurse.	Rodgers, D., charge nurse.
Nott, H. C., Dr., R.M.O.	Brinsley, D. A. H., charge nurse.
Beard, J. R. S., Dr., R.M.O.	Horne, S. H., engineer.
Steele, K. N., Dr., R.M.O.	Medcalf, E., clerk.
LeMessurier, F. N., Dr., R.M.O.	Wilson, A. V. charge nurse.
Verco, J. S., Dr., R.M.O.	Bennett, M. A., charge nurse.
Guymer, E. A., Dr., R.M.O.	Dunn, L. A., charge nurse.
Kitson, F., charge nurse.	Holden, F. M., charge nurse.
Daw, L. C., charge nurse.	Rogers, A. M., charge nurse.
Turner, C. T., Dr., R.M.O.	Howie, L. C., charge nurse.
Close, W. J., Dr., R.M.O.	Ridgway, D. A., charge nurse.
Wall, F. L., Dr., R.M.O.	McHugh, E. A. M., probationer.
Barnes, G. E., charge nurse.	Wharff, M. H., probationer.
Clarence, F. E., asst. laby.	Shapter, R. E., laby. attendant.
Thompson, F. H., attendant.	Coombs, V. R., charge nurse.
Smeaton, B., Dr., H.M.O.	Sutherland, M. I., charge nurse.
Nelson, H. G., clerk.	Parkinson, I. L., charge nurse.
Burns, W., asst. attendant.	McConville, M. A., charge nurse.
Smith, D., porter.	Kealy, M., charge nurse.
James, I., porter.	Stevens, V. J., charge nurse.
McKenzie, A., kitchen.	Ringwood, A. M., charge nurse.
Hayward, W. T., Dr., H.M.O.	Hunt, M. A., charge nurse.
Hamilton, J. A. G., Dr., H.M.O.	Osborne, A. C. L., charge nurse.
Wilson, T. G., Dr., H.M.O.	Paterson, A. G., charge nurse.
Browne, J. W., Dr., H.M.O.	Thomas, L. E., charge nurse.
Scott, F. S., Dr., H.M.O.	Sandison, E. M., charge nurse.
Kellaway, Professor, H.M.O.	Couston, J. H., charge nurse.
Smith, W. L., Dr., R.M.O.	Malcolm, M. S., probationer.
Haste, R. A., Dr., R.M.O.	Rudall, Maud B., charge nurse.
Shepherd, A. E., Dr., H.M.O.	Hoggarth, J. M., charge nurse.
Rogers, R. S., Dr., H.M.O.	



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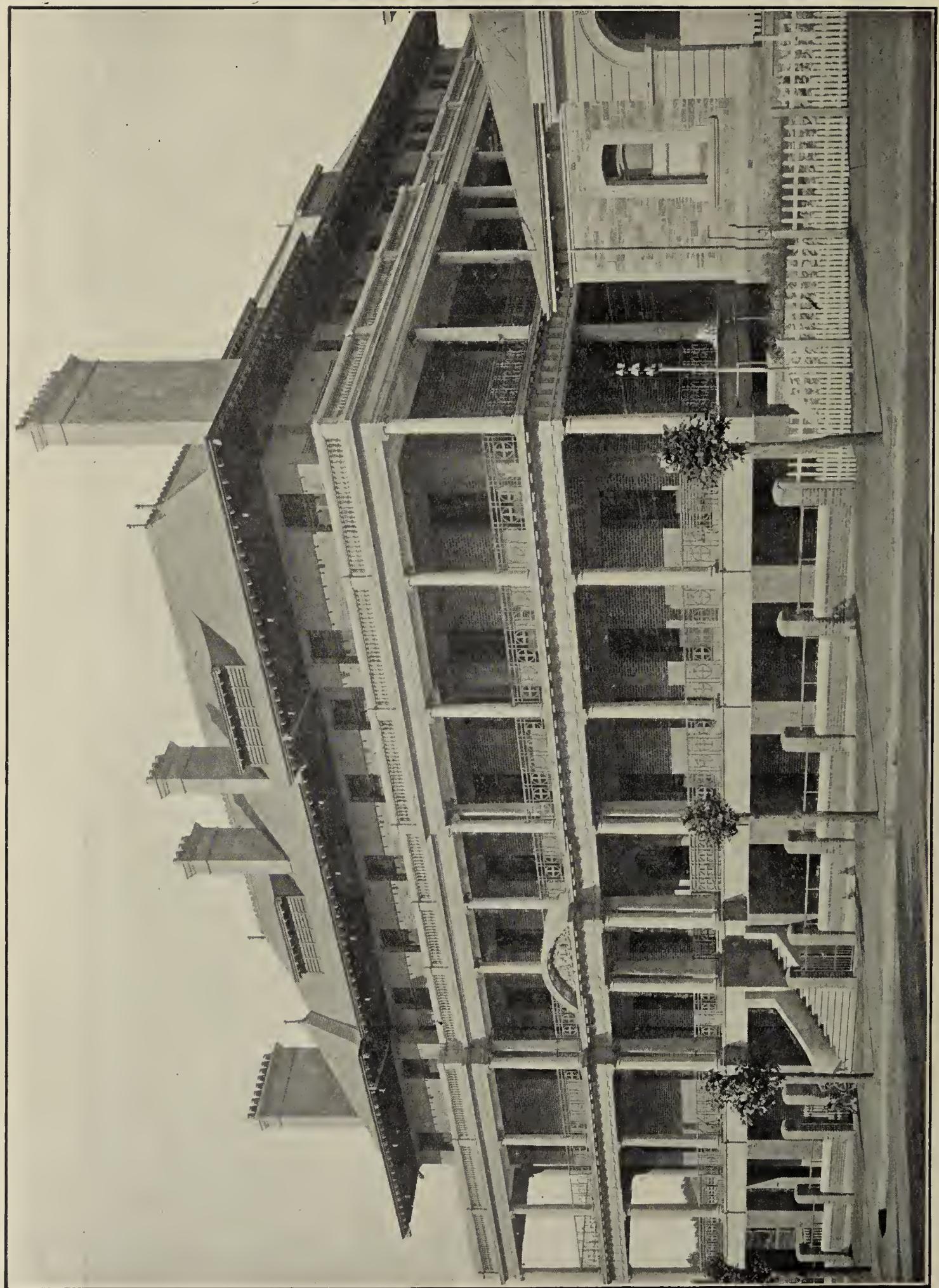
THE ADELAIDE HOSPITAL.

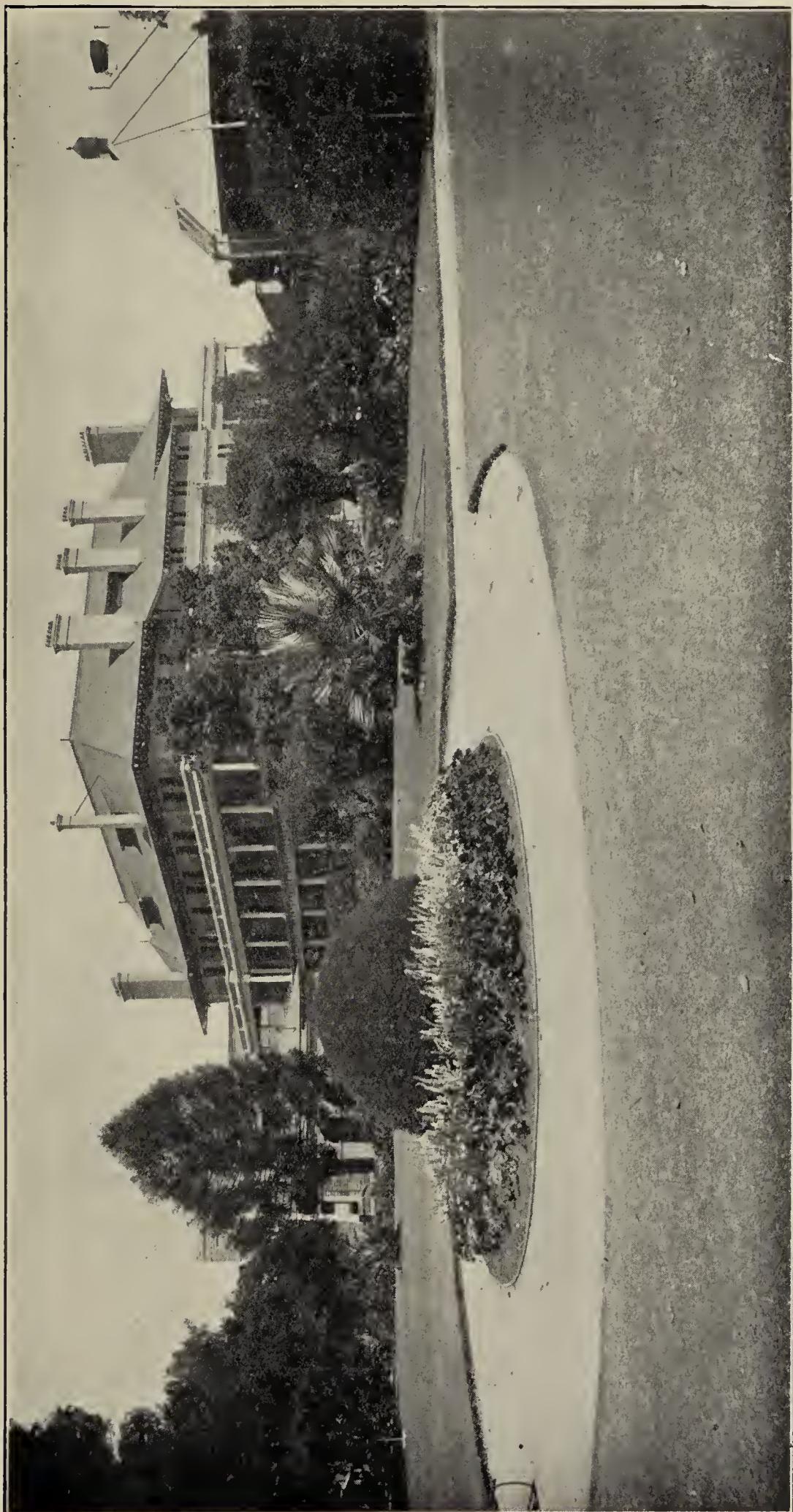
(p. 4—1)

George Gall.

NURSES' HOME (Front View).

(p. 4—2)





(p. 4—3\*)      VIEW OF HOSPITAL GROUNDS, ETC. (Showing Nurses' Home).



## EXTRACTS FROM RULES AND REGULATIONS.

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### ADMISSION AND DISCHARGE OF PATIENTS.

1. *Admission.*—Every contributor of £2 shall have the privilege of recommending two indoor or 12 outdoor patients within a year of date of such contribution; and of £5, five indoor or 30 outdoor patients within the year; of £10 annually, the privilege of having always one patient in the Hospital. A subscriber of £20 or over becomes entitled to Life Membership.
2. It is to be distinctly understood that these recommendations are only to be issued by the contributors to persons who cannot pay for medical treatment elsewhere. Hour of attendance of out-patients at the Out-patients' Department, Adelaide Hospital, 9 a.m.
3. Life contributors to have the same privileges in proportion; their donations being estimated as annual contributions of one-tenth.
4. It is optional for contributors to have indoor order-forms supplied in lieu of outdoor forms, at the rate of one of the former for six of the latter.
5. It is to be distinctly understood that these recommendations are *only to be given to persons who, on account of their financial position, are proper subjects for Hospital treatment.*
6. Applicants for admission to the Hospital shall, unless possessed of means sufficient to pay for medical advice, make a declaration, on a form printed for that purpose, to the effect that they are unable to pay for medical advice, and stating whether they are entitled to medical attendance from any benefit society or lodge.
7. Every member of the Board of Management and every legally qualified medical practitioner may likewise recommend patients for admission; severe accidents and cases of real emergency may be admitted at all times by the Resident Medical Officer on duty.
8. No female for the purpose of confinement shall be deemed fit for Hospital treatment; and no children under 10 years of age or infant shall be admitted on account of the condition of the mother alone, except with the advice of the Honorary Medical Officer. Infectious cases other than typhoid or tuberculosis are admitted to the Infectious Diseases Block. The Boards of Health representing the various municipalities being responsible for the isolation of such cases at a cost of 4s. 4d. per day per patient.
9. The proper hours for patients to present their recommendations for admission to the Hospital are from 10 a.m. to 4 p.m., except in cases of emergency or accident.
10. Any case which can be treated at the Out-patients' Department, or which is obviously incurable, cannot be admitted, except by special order of a visiting Medical Officer.
11. No patient shall be discharged from the Hospital without the consent of the visiting Medical Officer, except as provided for under the regulations or in cases of misconduct.

### ADMISSION ON PAYMENT OF FEES FOR MAINTENANCE.

1. Persons seeking admission whose means will not enable them in any other way to procure such medical attendance as their cases may require may be admitted into the institution upon payment of maintenance fees at the rate of from 3s. to 6s. per diem, and upon the patient or a responsible person making an agreement with the Secretary guaranteeing the payment during the time the patient remains in the institution.
2. Every person making a declaration or statement in writing when applying for admission to the Hospital that he is unable to pay for medical advice, and that he is not entitled to any benefit from any lodge, shall, nevertheless, be liable to pay to the Board the sum of £2 2s. for each week, and a proportionate sum for any part of a week, during which he receives medical attendance at or from the Hospital.

### VISITORS.

1. Friends desirous of visiting patients may, unless prohibited by the Resident Medical Officer, be admitted to the institution (by tickets only, to be procured in the wards) for that purpose on Tuesdays, Thursdays, and Sundays, between the hours of 2 and 4 p.m., and shall leave the wards punctually at the latter hour—a bell will be rung five minutes before the time for departure—but no more than two visitors to each patient are allowed on any one day, unless specially authorised. Exceptions to the above rule will only be allowed by special permission of the Resident Medical Officer or Medical Superintendent in favor of near relations, friends of patients in a dangerous state, or to Jews on their Sabbath. Visitors are strictly forbidden, on pain of expulsion from the wards, to introduce food, drink, or refreshment of any kind whatever without the sanction of the Resident Medical Officer in charge of the patient; and to ensure the perfect observance of this rule all parcels, &c., must be opened in the presence of the nurse on duty in the ward.

### VISITING PATIENTS BY NIGHT.

In order to obviate certain difficulties to relatives of the patients in the Adelaide Hospital who cannot for business reasons visit by day, the Hospital authorities have inaugurated a scheme which will, it is hoped, be satisfactory both to the public and the Hospital.

A special night visitors' card, signed by the Medical Superintendent, will be issued to eligible persons within 24 hours of the admission of a patient to the Hospital. This card, on presentation at the Hospital, will enable the person to visit his or her sick relative at the times stated thereon.

Special permission without cards will be given to relatives of patients who are dangerously ill.

### MORAL AND RELIGIOUS INSTRUCTION.

1. Patients are at liberty to receive the visits of ministers of the religious denomination to which they respectively belong.

# R E P O R T.

## ADELAIDE HOSPITAL.—ANNUAL REPORT.

THE Board of Management of the Adelaide Hospital have the honor to submit, for the information of His Excellency the Governor, the contributors to the funds of the hospital, and the general public, their fifty-second annual report of the condition and progress of the institution for the year ended December 31st, 1921.

*Hospital Statistics for the Years 1870 to 1921, inclusive.*

Year.	Number of Cases Admitted.	Number of Deaths of In-Patients.	Average Daily number of Patients in Hospital.	Average number of Days Patients Discharged during the Year have been in Hospital.	Annual Cost of each In-Patient, i.e., per Bed *Occupied.	Number of Attendances of Out-Patients Treated.	Total Annual Expenditure. †	Annual Contributions Received, including 10 per cent. of all Life Contributions.	Amount of Fees Received for Maintenance of Patients. ‡	Fees received towards Maintenance (based on total average of Patients, and not deducted in calculating "Annual Cost of each Patient").		
										£	s.	d.
1870	1,203	97	151	43	46 9 2½	12,885	8,131 5 6	717 18 6	283 3 1	1 17 6		
1871	1,288	87	141	40	46 15 11	15,463	7,619 11 2	843 9 10	346 0 6	2 9 1		
1872	1,344	108	139	38	47 2 9½	16,621	7,488 11 5	1,397 14 11	411 19 7	2 19 3½		
1873	1,438	81	137	35	47 2 10	15,930	7,284 3 2	1,234 15 3	503 15 10	3 13 6½		
1874	1,685	98	134	29	51 4 3½	14,872	7,778 13 2	1,149 7 2	446 1 9	3 6 7		
1875	1,958	179	157	29	46 2 0	17,220	8,479 2 9	1,185 3 7	322 0 4	2 1 0½		
1876	2,130	167	169	27	51 15 1½	16,456	9,947 5 4	1,386 13 0	500 9 4	2 19 11½		
1877	2,157	153	188	30	53 7 2½	20,665	11,597 18 8	1,298 17 4	403 12 6	2 2 11½		
1878	2,441	185	189	28	46 2 11	20,093	10,156 2 6	1,274 4 11	821 0 6	4 6 10½		
1879	2,225	148	165	26	48 8 8	15,242	9,566 10 3	1,276 13 8	734 13 4	4 9 0½		
1880	2,088	139	155	30	47 16 2½	15,763	8,705 1 8	1,366 17 3	726 12 5	4 13 9		
1881	2,105	131	159	25	43 19 4½	15,981	8,196 3 6	1,324 2 1	674 19 6	4 4 10½		
1882	2,115	176	174	28	44 2 5½	14,188	8,937 2 0	1,815 10 5	700 4 1	4 0 5½		
1883	2,119	174	165	28	58 14 2	7,661	10,548 16 3	1,837 9 9	637 12 10	3 17 3½		
1884	2,129	159	172	28	56 6 6	8,218	10,693 3 9	1,856 11 6	791 18 3	4 12 1		
1885	2,024	153	167	29	53 4 8	7,445	9,755 11 0	1,722 7 3	660 14 9	3 19 1½		
1886	1,878	164	174	33	51 14 10½	10,320	9,679 8 6	1,410 8 5	565 19 10	3 5 0½		
1887	1,895	144	172	32	51 16 10	10,554	9,686 13 11	2,059 9 3	657 2 3	3 16 4½		
1888	2,003	180	184	31	49 13 3½	10,983	9,875 11 7	1,852 0 5	529 19 5	2 17 7½		
1889	2,075	169	191	33	64 5 3	13,046	12,877 18 6	1,746 15 6	435 3 5	2 5 6½		
1890	2,026	191	185	32	63 4 10½	12,877	12,416 4 2	1,960 19 5	552 0 1	2 19 8		
1891	2,147	205	192	31	66 7 10½	13,003	13,699 18 5	1,688 5 2	516 8 4	2 13 9½		
1892	2,251	193	195	29	66 17 10½	12,495	14,011 10 11	1,810 6 10	497 17 8	2 11 0½		
1893	2,328	213	201	30	62 7 9	14,513	13,483 2 10	1,531 8 11	662 3 4	3 5 11		
1894	2,366	209	209	33	62 8 2	15,286	14,012 17 1	1,557 13 7	570 2 0	2 14 6½		
1895	2,621	260	239	37	53 5 7	16,484	13,760 3 6	1,514 10 1	563 3 6	2 7 1		
1896	2,438	222	225	32	61 16 8	15,808	14,890 9 8	1,222 9 0	427 17 7	1 18 0½		
1897	2,740	225	231	31	71 1 10	18,040	17,568 4 10	1,362 18 0	421 3 2	1 16 5½		
1898	3,246	246	234	26	69 14 6	17,468	17,564 19 1	1,103 16 5	320 5 10	1 7 4½		
1899	3,493	257	244	25	69 7 6½	18,117	18,200 12 0	1,266 9 9	513 18 8	2 2 1½		
1900	3,036	243	219	25	75 5 10½	17,390	17,616 1 8	852 8 0	338 14 11	1 10 11		
1901	3,371	282	250	25	75 12 11	19,233	20,103 12 8	921 3 0	322 14 7	1 5 9½		
1902	3,193	264	248	26	73 5 6	20,233	19,065 1 8	1,127 2 3	602 19 8	2 8 7		
1903	3,055	291	254	23	66 8 5	20,059	17,542 10 8	973 16 6	720 19 3	2 16 9		
1904	2,724	265	214	28	68 16 10	20,818	15,491 7 4	984 1 11	799 10 8	3 14 9		
1905	2,810	264	217	25	67 18 2	22,120	15,511 7 6	985 3 1	816 11 1	3 15 3		
1906	3,056	253	222	25	67 16 7	21,902	15,919 7 5	915 2 6	739 9 5	3 6 7		
1907	3,022	276	241	28	71 0 10	21,287	18,057 13 2	911 1 6	844 15 2	3 10 1		
1908	3,200	270	266	26	75 1 3	20,089	20,856 8 0	1,059 9 6	828 19 9	3 2 4		
1909	3,452	296	273	25	74 16 0	19,766	21,605 16 4	1,086 16 9	758 19 0	2 15 7		
1910	3,763	332	274	21	77 15 10	18,838	22,488 12 10	1,066 8 2	955 18 5	3 9 9		
1911	3,861	334	278	23	83 17 0	16,910	24,527 14 7	1,105 18 0	1,027 16 1	3 13 3		
1912	4,024	330	288	26	101 6 0	19,343	30,832 8 7	1,221 8 1	1,619 13 3	5 12 6		
1913	4,428	388	284	24	101 4 6	20,615	30,514 6 7	1,220 12 6	1,484 9 0	5 4 6		
1914	5,013	371	298	20	97 16 10	20,808	30,848 4 7	1,119 14 11	1,003 10 4	3 7 4		
1915	4,636	416	293	21	103 0 4	20,827	33,416 11 11	1,004 7 10	1,462 9 1	4 19 10		
1916	4,861	377	292	20	119 10 2	16,882	36,857 6 2	1,001 7 9	1,130 12 11	3 17 5		
1917	4,919	349	297	21	133 11 8	15,339	41,678 15 1	962 4 4	1,704 13 9	5 14 10		
1918	5,292	423	314	21	119 17 0	18,398	39,659 1 2	1,082 17 10	1,962 13 4	3 1 3		
1919	4,765	405	299	20	142 14 11	16,370	45,255 7 0	1,133 7 9	2,021 7 8	6 15 2		
1920	4,980	416	334	23	165 16 1	17,591	57,378 9 1	1,032 5 5	2,157 7 10	5 19 9		
1921	5,105	449	372	23	157 14 9	18,997	64,626 16 4	1,061 3 2	2,630 6 8	7 1 5		

\* The cost per head is arrived at by making allowance for attendance and medicines supplied to the out-patients, &c.

† The total expenditure does not include Consumptives' Home, £5,918 3s. 1d.; Infectious Diseases Block, £5,137 11s. 3d.;

Bacteriological Laboratory, £2,970 12s. 4d.; and Department of Dentistry, £644 3s. 1d.

‡ The fees received do not include Consumptives' Home, £688 9s. 6d.; Infectious Diseases Block, £3,732 4s. 0d.

Bacteriological Laboratory, £2,301 9s. 5d.; and Department of Dentistry, £50 17s. 3d.

The total number of deaths (449) does not include Consumptives' and Cancer Home (121) and Infectious Diseases Department (28).

The statistics for the year as compared with those of 1920, show the following:—Increases—Annual contributions, £28 17s. 9d.; Number of admissions, 125; number of deaths, 33; average daily number of in-patients, 38; attendances of out-patients, 1,406; expenditure, £7,248 7s. 3d.; patients fees, &c., £472 18s. 10d. Decrease—Annual cost of in-patients £6 1s. 4d.

Three hundred and eight (308) patients have been sent to the Convalescent Hospital, Semaphore, at a cost to this institution of £19 1s. The Da Costa Fund, created by Miss Da Costa, to assist convalescent patients leaving hospital, bore the expense of much the greater portion of this number.

The number of cases of enteric fever treated, showing percentage of mortality over same:—

In 1887 there were 161 cases and 19 deaths = 11.8 per cent.

In 1887 there were 161 cases and 16 deaths = 10·6 per cent.						
" 1888	"	177	"	15	"	= 8·4 "
" 1889	"	153	"	21	"	= 13·7 "
" 1890	"	95	"	16	"	= 16·8 "
" 1891	"	63	"	13	"	= 20·6 "
" 1892	"	85	"	15	"	= 17·6 "
" 1893	"	76	"	8	"	= 10·5 "
" 1894	"	131	"	18	"	= 13·7 "
" 1895	"	97	"	19	"	= 19·6 "
" 1896	"	138	"	18	"	= 13·0 "
" 1897	"	167	"	17	"	= 10·1 "
" 1898	"	303	"	24	"	= 7·9 "
" 1899	"	195	"	16	"	= 8·2 "
" 1900	"	75	"	8	"	= 10·6 "
" 1901	"	155	"	15	"	= 9·6 "
" 1902	"	135	"	19	"	= 14·0 "
" 1903	"	76	"	7	"	= 9·2 "
" 1904	"	42	"	7	"	= 16·6 "
" 1905	"	52	"	5	"	= 9·6 "
" 1906	"	66	"	14	"	= 21·2 "
" 1907	"	55	"	12	"	= 21·8 "
" 1908	"	72	"	9	"	= 12·5 "
" 1909	"	71	"	10	"	= 14·0 "
" 1910	"	64	"	7	"	= 10·9 "
" 1911	"	52	"	5	"	= 9·6 "
" 1912	"	64	"	6	"	= 9·3 "
" 1913	"	105	"	13	"	= 12·4 "
" 1914	"	72	"	11	"	= 15·3 "
" 1915	"	66	"	9	"	= 13·6 "
" 1916	"	86	"	12	"	= 14·0 "
" 1917	"	59	"	6	"	= 10·1 "
" 1918	"	35	"	1	"	= 2·8 "
" 1919	"	14	"	3	"	= 21·4 "
" 1920	"	33	"	3	"	= 9·0 "
" 1921	"	60	"	4	"	= 6·7 "

Of the cases of enteric fever the following statistics are of value:—

Localities from whence cases of Enteric Fever were received.

	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
Adelaide .....	10	12	16	16	17	14	12	7	3	15	15
Alberton .....	1	2	3	—	—	1	2	—	—	—	2
Allandale .....	—	—	—	1	—	—	—	—	—	—	—
Ambleside .....	—	—	—	—	—	—	—	—	—	1	—
Ashton .....	—	—	—	—	1	—	—	—	—	—	—
Athelstone ....	—	2	3	1	—	—	2	3	—	—	—
Balaklava .....	—	—	1	—	2	—	—	—	—	1	—

*Localities from which cases of Enteric Fever were received—continued*

*Localities from which cases of Enteric Fever were received—continued.*

	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
Kersbrook .....	1	—	—	—	4	—	—	—	—	—	—
Kensington ....	1	1	—	—	2	—	—	—	2	2	—
Kent Town ....	—	2	—	—	2	2	—	—	—	1	—
Keswick .....	—	—	—	—	—	—	1	—	—	—	—
Kilkenny .....	—	—	—	1	—	—	—	—	—	1	—
Kingston .....	—	—	—	—	—	1	—	—	—	—	—
Knightsbridge ..	—	—	—	1	—	—	—	—	—	—	—
Lameroo .....	—	—	—	—	1	—	—	—	—	—	—
Largs.....	—	—	—	—	1	1	—	1	—	—	—
Lockleys .....	—	—	—	1	—	—	—	—	—	—	—
Lower Light ....	—	—	—	—	—	—	—	—	—	1	—
Lower North Road	—	—	—	—	1	—	—	—	—	—	—
Magill .....	1	—	—	2	—	—	—	—	—	1	—
Mallala .....	—	—	—	1	—	—	—	—	—	—	—
Manoora .....	1	—	—	—	—	—	—	—	—	—	—
Manunka .....	—	—	1	—	—	—	—	—	—	—	—
Marleston .....	—	—	—	—	—	—	—	—	—	—	—
Marryatville....	—	—	1	—	—	—	—	—	—	—	—
Maylands .....	—	—	1	1	—	—	—	—	—	—	—
Medindie .....	—	1	—	—	—	—	—	—	—	—	—
Meningie .....	—	—	1	—	—	—	—	—	—	—	—
Middleton .....	—	—	—	—	—	—	—	1	—	—	—
Millbrook .....	—	—	—	—	—	1	—	—	—	—	—
Mildura .....	—	1	1	—	—	—	—	—	—	—	—
Mile End .....	2	—	—	1	1	1	—	—	2	—	—
Millswood.....	—	—	—	—	—	—	1	—	—	—	—
Mintaro .....	—	—	—	—	—	1	—	—	—	—	—
Mitcham .....	—	—	1	—	—	1	—	—	—	—	—
Morgan .....	—	—	1	—	—	—	—	—	—	—	—
Morphettville ..	—	—	—	2	—	—	—	—	—	—	—
Mount Gambier...	—	—	1	—	—	1	—	—	—	—	—
Mount Lofty ...	1	—	—	—	—	—	—	—	—	—	—
Murray Bridge..	—	—	—	—	1	—	—	—	—	—	—
Mylor .....	—	1	—	—	—	—	—	—	—	—	—
Nackara .....	—	—	—	—	—	2	—	—	—	—	—
Nairne .....	—	—	—	—	—	—	—	—	—	—	—
New Glenelg....	—	—	1	—	—	—	—	—	—	—	—
Noarlunga.....	—	—	—	4	—	—	—	—	—	—	—
Norton's Summit	—	—	—	—	1	—	—	—	—	—	—
Norwood .....	3	2	—	1	—	2	2	—	—	—	—
Oakbank .....	—	—	—	—	—	—	—	—	—	—	—
Oaklands .....	—	—	—	1	—	—	—	—	—	—	—
Ottoway .....	—	—	—	—	—	—	1	—	—	—	—
Paradise .....	—	—	4	—	—	—	—	—	—	—	—
Parkside .....	2	2	—	—	2	—	1	1	—	2	—
Payneham.....	—	2	—	—	—	—	1	—	—	1	—
Penong .....	—	—	1	—	—	—	—	—	—	—	—
Peterhead .....	—	—	1	—	—	1	—	—	—	—	—
Pinnaroo .....	—	1	—	—	2	—	—	—	—	—	—
Plympton .....	—	—	—	—	1	—	—	—	—	—	—
Point McLeay ..	—	—	—	—	1	—	—	—	—	—	—
Port Adelaide ..	4	3	10	—	4	4	1	2	—	2	3
Port Augusta ..	—	—	1	—	—	—	—	—	—	—	—
Port Elliot .....	—	—	—	—	—	—	1	—	—	—	—
Port Lincoln ..	—	1	—	—	—	—	—	—	—	—	—
Port Pirie .....	—	1	—	—	—	—	—	—	—	1	—
Portland .....	—	—	1	1	—	2	—	—	—	—	—
Prospect .....	1	1	—	3	—	1	1	—	—	1	—
Queenstown .....	—	—	—	—	1	—	—	1	—	—	—
Reynella .....	—	—	—	—	—	—	—	—	1	—	—
Richmond .....	—	1	—	—	—	—	—	—	—	—	—
Rose Park.....	—	1	—	—	2	—	—	—	1	—	—
Rosewater.....	—	1	6	—	1	1	—	2	—	—	—
Rowland's Flat..	—	—	—	—	—	1	—	—	—	—	—

*Localities from which cases of Enteric Fever were received—continued.*

	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
Sandwell .....	—	—	—	2	—	1	1	—	—	—	—
Semaphore ....	—	—	1	—	—	—	—	1	—	1	—
Stirling West ...	—	—	—	—	—	—	—	—	—	—	1
Ships, Seamen, fm	—	—	9	—	2	—	1	—	1	2	2
Stockade Reserve	—	—	—	—	—	—	1	—	—	—	—
Stepney .....	—	1	—	—	—	—	—	—	—	—	—
Strathalbyn ....	—	—	—	—	—	—	1	—	—	—	—
Tailem Bend....	—	—	—	—	—	—	—	1	—	—	—
Tea Tree Gully..	—	2	—	—	1	—	—	—	—	—	—
Thebarton.....	—	—	1	—	—	—	1	—	—	—	—
Torreenville ....	—	—	—	1	—	—	—	—	—	—	—
Two Wells ....	—	—	—	—	—	—	—	—	—	—	1
Unley .....	—	—	1	1	1	1	—	—	—	—	—
Uraidla ....	—	—	—	—	—	—	1	—	—	—	—
Victor Harbor ..	—	—	—	1	—	2	1	—	1	—	2
Walkerville ....	—	2	—	1	1	2	1	—	—	—	—
Wasleys .....	—	—	—	1	—	—	—	—	—	—	—
Welland .....	—	—	—	—	—	—	3	—	—	1	—
Westbourne Park	—	—	—	—	—	1	1	—	—	—	—
Willaston .....	—	1	—	1	—	—	—	—	—	1	—
Williamstown ..	1	1	1	—	—	—	1	—	—	—	—
Willunga .....	—	—	1	—	—	—	—	—	—	—	—
Wolseley .....	—	—	—	—	1	—	—	—	—	—	—
Woodville....	—	—	—	1	—	2	—	1	—	—	—
Yankalilla.....	—	—	—	—	—	—	—	1	—	—	—
Yatala .....	—	1	3	—	—	1	2	1	—	—	—
Yorke Peninsula.	—	—	—	—	—	—	—	1	—	—	—
Outside State ..	—	—	—	—	—	—	—	1	—	—	—
No Fixed Abode.	—	—	—	—	—	—	—	—	—	—	1
Totals ....	52	64	105	27	66	86	59	34	14	33	60

The admissions of the above mentioned were distributed throughout the year as follows, viz.:—

	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
January.....	8	11	16	7	9	11	22	7	—	7	10
February ..	11	4	13	6	8	10	12	6	4	6	7
March .....	8	7	19	12	16	13	4	6	2	6	6
April .....	2	12	6	13	12	12	6	3	4	4	4
May .....	8	7	19	18	10	2	3	7	2	3	6
June .....	3	5	2	1	—	3	2	—	—	1	2

## REPORT, 1921.

The Board of Management was reappointed with the exception of Mr. J. G. Moseley, M.P., and Dr. B. H. Morris was appointed in his place.

Mr. W. G. Coombs was unanimously re-elected Chairman and Dr. R. S. Rogers as Deputy Chairman.

The Chairman (Mr. W. G. Coombs) was granted nine months leave of absence to enable him to visit England.

Mr. T. B. Merry was also granted five months leave of absence.

### OBITUARY.

*Dr. Benjamin Poulton*, Honorary Consulting Surgeon.—The late Dr. Poulton had been closely connected with the Hospital for 40 years as House Surgeon, Honorary Surgeon, and Honorary Consulting Surgeon, during which time he rendered most valuable services to the institution. His strong personality, together with his high professional ideals, won for him the esteem of all.

*W. C. Medlyn*, Secretary.—Mr. Medlyn had been connected with the Hospital for about 34 years, and for nearly half that period as Secretary, the duties of which he carried out with credit.

### HONORARY OFFICERS.

The following honorary officers were appointed during the year:—

*Honorary Consulting Physician*.—Dr. H. Swift was appointed in appreciation of the many years of valuable services rendered by him as Honorary Physician.

*Honorary Medical, &c., Officers*.—Dr. Edward Angas Johnson, reappointed; Dr. C. T. C. de Crespigny, reappointed; Dr. William Ray, *vice* Dr. Swift; Dr. F. S. Hone, new (Verco) ward; Dr. H. Carew Nott, radiologist; Dr. D'arey R. W. Cowan, asst. Physician, *vice* Dr. Ray; Dr. S. Roy Burston, asst. Physician, *vice* Dr. Hone; Dr. A. R. Southwood, asst. Physician, I.D.B., *vice* Dr. Burston; Dr. D. L. Barlow, clinical pathologist; Dr. W. C. Sangster, clinical asst. ear, nose, and throat; D. G. Roy West, Dr. Gilbert Brown, Dr. P. Santo Messent, anesthetists.

*Honorary Dental Surgeons*.—Mr. Alex L. White relinquished his duties after many years of valuable services, and the following gentlemen were appointed:—Dr. Arthur Chapman, Dr. W. T. Shanasy, Mr. Frank Swan, Dr. P. Ray Newling, and Dr. E. I. Millhouse.

Dr. Shanasy, owing to illness, was unfortunately compelled to resign and Dr. Leonard W. Trott was appointed in his place.

Dr. Arthur Chapman was also appointed Dental Superintendent, giving part time services to the duties of that position.

### SECRETARY.

Mr. R. J. Champion, for many years in the office of the Agent-General in London, was appointed, and commenced his duties on the 1st November.

### MATRON.

Miss Eleanor Harrald, who on several occasions has acted in the capacity of matron, was appointed to that position on the retirement of Miss Graham.

### NIGHT CLINICS.

Dr. Harold Rischbieth and Dr. Phoebe Chapple were appointed surgeons to the male and female departments respectively, and on the resignation of Dr. Chapple, Dr. Rischbieth took over the female department and Dr. Glen H. Burnell was appointed surgeon to the male department.

### RESIDENT MEDICAL OFFICERS.

The Government approved of the recommendation of the board to the appointment of two extra officers, one for the infectious diseases block and the other for the new ward.

### VERCO WARD.

During the year a new ward was erected on the north of Flinders and Light block, providing 30 beds for male medical cases. This ward was occupied soon after the end of year now under review.

It was decided to name the ward "Verco," in recognition of the many years of valuable gratuitous services rendered by Sir Joseph Verco, K.B., as honorary physician.

### GOLD MEDALS.

The following nurses passed first class in the examinations during their probationership, and were each awarded a gold medal:—Constance Leader, Lillie M. Weidenbach.

### DENTAL HOSPITAL.

The new building mentioned in my previous report is now in course of erection and in all probability it will be completed and equipped during the coming year.

### NURSING STAFF.

Nurses have been granted one day off every week instead of every fortnight as previously. This has necessitated the employment of 20 additional probationers.

### X-RAY DEPARTMENT.

Arrangements were made for the purchase of an upright screening stand with reflector costing £200, so as to prevent direct radiation, and as a safeguard to the operator.

### BOARD OF MANAGEMENT.

Last session of Parliament an Act was passed to abolish the present board and substitute a controlling board of three members. The Chairman to be the Inspector-General of Hospitals and the two other members, Messrs. W. G. Coombs and J. Wallace Sandford, were appointed by the Governor.

The hospital is declared to be a school of medical and dental instruction in connection with the University of Adelaide, and provision is made for the appointment of an advisory committee consisting of seven members for the purpose of assisting the Council of the University and the board with respect to matters concerning the medical and dental courses.

W. G. COOMBS, Chairman.

### CONTRIBUTIONS.

*Hospital Reports*.—From kindred institutions in and out of the Commonwealth.

*Books, Magazines, Clothing, Produce, Flowers, Etc.*.—Various Church Societies and kind friends, also Band Concerts by the Military, Vice-Regal, O.B.I., Eastern Suburban, Adelaide City, Red Cross, and others.

*Fruit and Flowers*.—Director, Botanic Gardens; Experimental Orchard, Blackwood.

*Newspapers*.—The proprietors of the *Observer*, *Church Guardian*, *M.A.N.*, *War Cry*, *Patriot*, *Critic*, and *Barrier Daily Truth*.

*Linen*.—Many parcels of old linen were received from various donors.

*Number of Attendances during the Year of each Member of the Board.  
Meetings Held, 25.*

Mr. W. G. Coombs (on leave) .....	7
Mrs. Cullen .....	22
Mrs. Edwards .....	24
Mrs. Nicholls .....	23
Dr. Hayward .....	20
Dr. Hill .....	7
Dr. Rogers .....	25
Dr. Morris (appointed April 18th, 1921) .....	12
Mr. Butterly .....	10
Mr. Frinsdorf .....	22
Mr. Merry (on leave) .....	15
Mr. Wilson (on leave) .....	12
Hon. W. Morrow .....	14
Mr. F. W. Lundie .....	16
Mr. Moseley (resigned February 28th, 1921) .....	1
Mr. Ponder .....	19
Mr. Robinson .....	13

Subjoined is a list of the honorary and paid staff of the Hospital, including the Consumptives' Home, and Infectious Diseases Block, Bacteriological Block, and Department of Dentistry:—

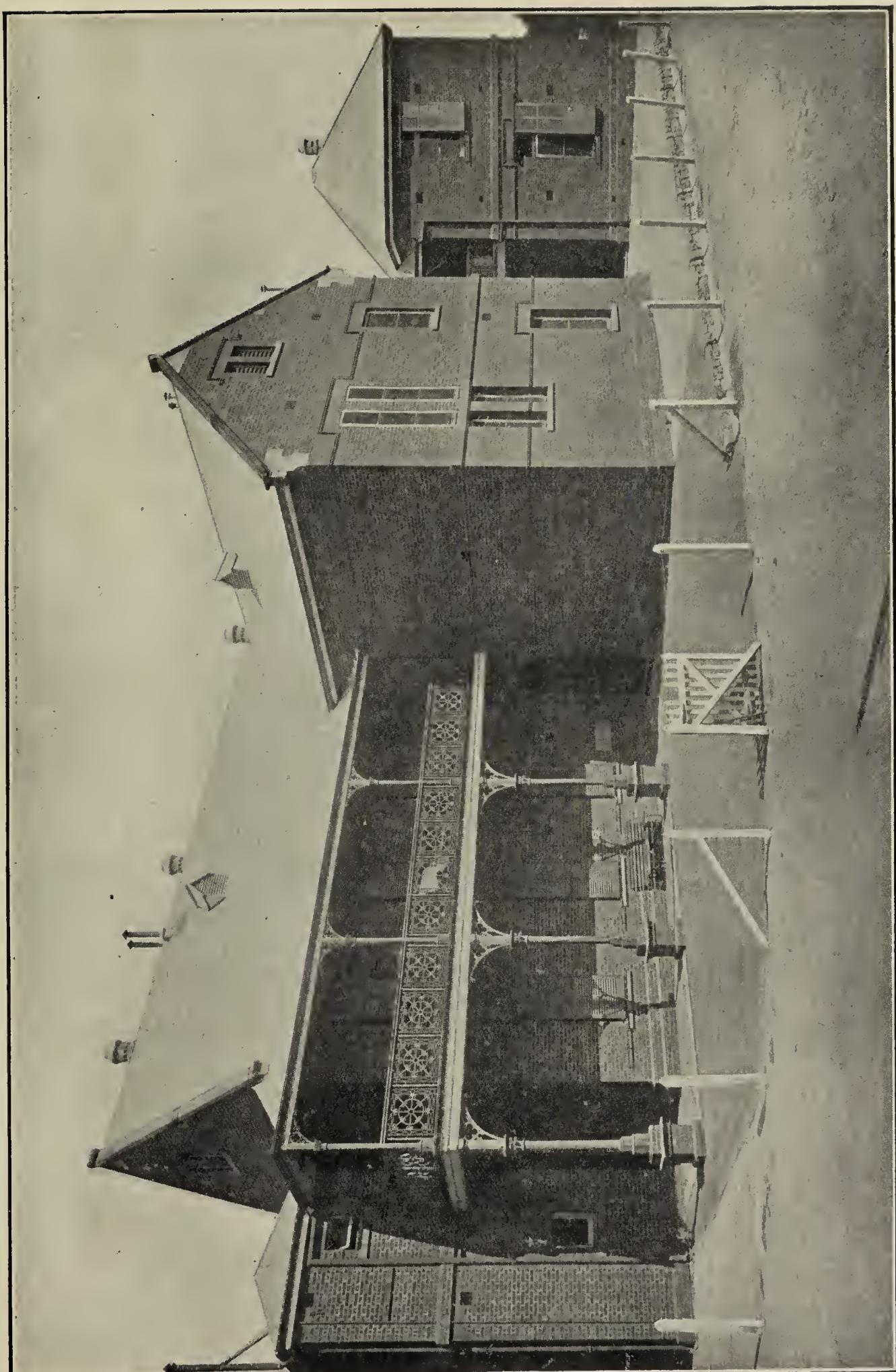
Honorary Consulting Physicians and Surgeons .....	12
Honorary Physicians .....	4
Honorary Surgeons .....	3
Honorary Gynaecologists.....	2
Honorary Ophthalmologists .....	
Honorary Dermatologist.....	
Honorary Pathologist .....	
Honorary Surgeon for Ear and Throat.....	
Honorary Clinical Assistant for Ear and Throat—.....	
Honorary Clinical Pathologist .....	
Honorary Radiologist .....	
Honorary Anaesthetists .....	
Medical Officers Venereal Clinic .....	
Honorary Bacteriologist in charge Vaccine Department .....	
Honorary Assistant Gynaecologists .....	
Honorary Assistant Physician, Infectious Diseases Block.....	
Honorary Assistant Physicians .....	
Honorary Assistant Physician to Neurology Department .....	
Honorary Assistant Surgeons .....	

*List of the Honorary and Paid Staff—continued.*

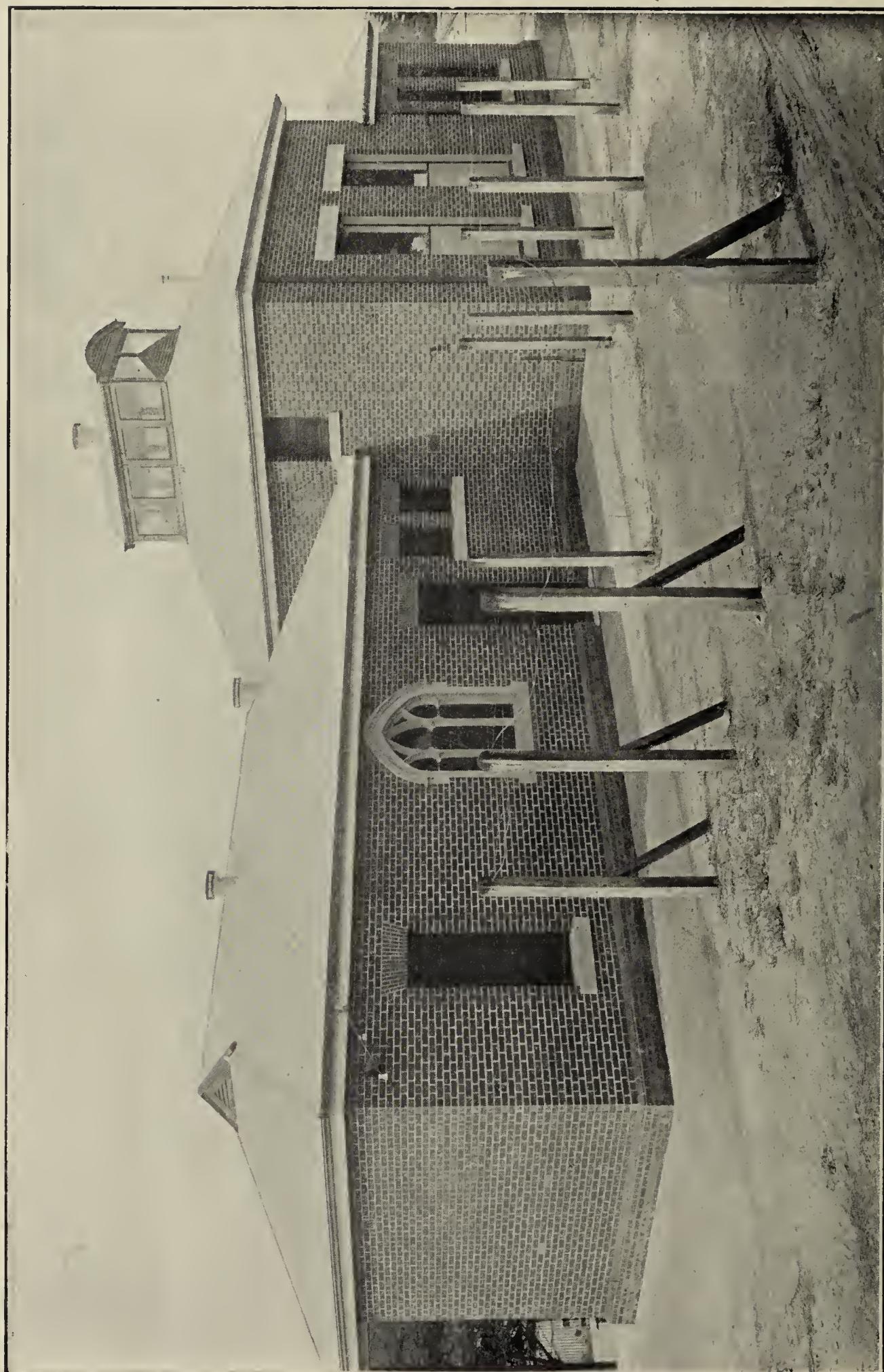
Honorary Consulting Masseur .....	1
Honorary Biochemist .....	1
Assistant Biochemist .....	1
Honorary Dental Surgeons.....	5
Medical Superintendent .....	1
Resident Medical Officers .....	10
Secretary .....	1
Storekeeper .....	1
Storekeeper's Clerk .....	1
Collector and Inquiry Officer .....	1
Clerks .....	6
Typiste .....	1
Dispensers .....	3
Telephonists .....	2
Matron .....	1
Superintendent Department of Dentistry.....	1
House Dental Surgeon, Department of Dentistry .....	1
Clerk, Department of Dentistry .....	1
Superintendent of Night Nurses .....	—
Matron Infectious Diseases Block.....	1
Matron Consumptive Home .....	1
Surgical Mechanic .....	1
Surgical Mechanic's Assistant .....	1
Assistant X-Ray Department.....	1
Director Bacteriological Department.....	1
Deputy Director do .....	1
Assistants do .....	5
Typist do .....	1
Resident Masseuse .....	1
Assistant Masseuse .....	3
Charge Nurses (day) .....	23
Charge Nurses (night).....	3
Nurse Operation Room .....	1
Charge Nurse (Out-patients' Department) .....	1
Probationer Nurses .....	141
Housekeeper .....	1
Seamstress.....	1
Housemaids and Wardmaids .....	56
Laundry Forewoman .....	1
Laundresses .....	24
Engineers .....	2
Carpenter .....	1
Cooks and other Attendants .....	40
Honorary Staff .....	50
Salaried Staff .....	347

OPHTHALMIC WARDS.

(P. 10—1)



PATHOLOGICAL BLOCK.  
(P. 10—2\*)



APPENDIX No. 2.—*Abstract Statement of Receipts and Expenditure.*

RECEIPTS.	£ s. d.	EXPENDITURE.	£ s. d.
Patients' fees .....	2,630 6 8	Salaries and extra services .....	22,677 10 5
Subscribers' contributions .....	845 11 10	Medicines, surgical instruments, druggists' sundries .....	6,718 13 4
Allowance by Government of 10 per cent. on life contributors' donations .....	215 11 4	Crockery, ironmongery, tinware, and repairs .....	2,064 4 1
Students' fees .....	516 10 3	Drapery .....	4,463 17 5
Sale of drugs, &c. (to Government departments) .....	302 9 0	Alcoholic stimulants .....	105 16 3
Sale of kitchen refuse .....	320 7 9	Provisions for patients, officers, nurses, and attendants:—	
Repayments .....	6 10 1	£ s. d.	
Sundries .....	29 15 1	Meat .....	4,052 3 5
Sale X-ray plates, &c. (Military) .....	117 0 6	Bread and flour .....	1,043 14 0
Rebate on gas .....	194 9 3	Milk .....	2,990 2 9
Nurses' bonds forfeited .....	70 0 0	Butter .....	1,907 10 0
Dental fees .....	50 17 3	Eggs .....	1,250 19 11
Patients' money unclaimed and bank interest .....	29 9 1	Groceries, &c. .....	5,001 4 10
*H.M. Government .....	5,328 18 1	Vegetables, &c. .....	1,321 13 9
	59,297 18 3	Fish .....	597 10 6
		Poultry .....	983 4 2
		Ice .....	201 11 3
		Aerated waters .....	79 0 6
			19,428 15 1
		X-ray appliances .....	1,117 7 9
		Dental stores .....	281 7 3
		Clock repairs .....	36 9 0
		Gas .....	1,997 1 6
		Fuel .....	2,455 1 5
		Water and sewer rates .....	808 5 2
		Stationery, printing, telegrams, telephone, &c. ....	883 14 7
		Maintenance of patients at Convalescent Hospital .....	19 1 0
		Advertising, &c. .....	105 15 0
		Railway fares for patients and freight .....	17 7 3
		Electric supply .....	511 9 1
		Brushware, &c. .....	126 9 3
		Rent, fire alarm .....	9 10 0
		Sundries .....	251 0 5
		Books, Medical .....	61 16 6
		Pharmacy and Anæsthetist's fees .....	88 4 0
		Repairs by Architect-in-Chief's Department .....	216 3 11
		Nurses' invalid cookery class .....	15 15 0
		Funeral services .....	6 5 0
		City rates .....	11 6 8
		Ambulance charges .....	148 10 0
		Total .....	£64,626 16 4
	£64,626 16 4		

The above statement does not include Consumptives' Home, Infectious Diseases Block, or S.A. Government Laboratory. The Department of Dentistry is excluded from July 19th.

\*The Adelaide Hospital being a Government department, all moneys received are paid into the Treasury, from which all disbursements are drawn.

## STATISTICS FOR YEAR 1921.

APPENDIX No. 3.—*Medical Statistics, 1921.*

	Males.	Females.	Total
Remaining in hospital on December 31st, 1920	201	86	287
Admissions during the year 1921 .....	—	—	5,105
			5,392

## Discharges during the year 1921—

Cured .....	1,925
Relieved .....	2,107
Unrelieved .....	561
Died .....	449
Remaining in hospital on December 31st, 1921—Males, 200; females, 150 .....	350
	5,392
Average number resident daily throughout the year .....	372
Mean residence of each patient in days .....	23
Number of out-patients attended during the year—new cases .....	3,821
Number of attendances of out-patients during the year ..	18,997

## Classification of Diseases of Patients Discharged for Year ending December 31st, 1921.

	Males.	Females.	Total.	Cured.	Relieved.	I. S. Q.	Died.	Still in.
1. Typhoid fever .....	45	20	65	31	20	11	7	1
2. Typhus fever .....	—	—	—	—	—	—	—	—
3. Relapsing fever .....	—	—	4	—	3	—	1	—
4. Malaria .....	4	—	—	—	—	—	—	—
4A. “ including malarial cachexia	—	—	—	—	—	—	—	—
5. Small pox .....	—	—	—	—	—	—	—	—
6. Measles .....	—	—	—	—	—	—	—	—
7. Scarlet fever .....	2	1	3	—	—	3	—	—
8. Whooping cough .....	—	—	—	—	—	—	—	—
9A. Diphtheria including croup	2	6	8	1	2	5	—	—
10. Influenza .....	8	10	18	9	7	—	1	—
11. Miliary fever .....	—	—	—	—	—	—	—	—
12. Asiatic cholera .....	—	—	—	—	—	—	—	—
14. Dysentery .....	—	—	—	—	—	—	—	—
15. Plague .....	—	—	—	—	—	—	—	—
16. Yellow fever .....	—	—	—	—	—	—	—	—
17. Leprosy .....	—	—	—	—	—	—	—	—
18. Erysipelas .....	—	1	1	—	1	—	—	—
19. Other epidemic diseases .....	—	—	—	—	—	—	—	—
20. Purulent infections and septicæmia	20	14	34	18	9	—	5	2
21. Glanders .....	—	—	—	—	—	—	—	—
22. Anthrax .....	—	—	—	—	—	—	—	—
23. Rabies .....	—	—	—	—	—	—	—	—
24. Tetanus .....	2	2	4	—	—	—	4	—
25. Myooses .....	—	—	—	—	—	—	—	—
26. Pellagra .....	—	—	—	—	—	—	—	—
27. Beriberi .....	—	—	—	—	—	—	—	—
28. Tuberculosis of the lungs ..	93	51	144	—	31	73	27	13
29. Acute miliary tuberculosis ..	1	1	2	—	—	2	—	—
30. Tuberculous meningitis ..	1	3	4	—	—	1	3	—
31. Abdominal tuberculosis ..	2	6	8	—	3	1	3	—
32. Pott's disease .....	1	1	2	—	—	1	—	—
33. White swellings .....	2	3	5	1	2	2	—	1
34. Tuberculosis of other organs	24	17	41	11	20	4	—	6
35. Disseminated tuberculosis ..	—	1	1	—	—	1	—	—
36. Rickets .....	—	—	—	—	—	—	—	—
37. Syphilis—	—	—	—	—	—	—	—	—
A.—Primary .....	2	—	2	—	2	—	—	—
B.—Secondary .....	7	13	20	1	11	5	1	2
C.—Tertiary .....	11	8	19	—	12	4	1	—
D.—Hereditary .....	—	—	—	—	—	—	—	—
E.—Period not stated .....	—	—	—	—	—	—	—	—
38A. Soft chancre .....	1	1	2	—	2	—	—	—
38B. Gonococcus infection .....	52	17	69	7	46	16	—	—
39. Cancer and other malignant tumors of the buccal cavity	33	2	35	8	17	6	4	—
40. Cancer and other malignant tumors of stomach and liver	34	13	47	1	9	24	11	2
41. Cancer and other malignant tumors of peritoneum, intestines, and rectum	15	9	24	2	10	8	3	1
42. Cancer and other malignant tumors of the female genital organs	—	20	20	—	4	10	4	2

## Classification of Diseases of Patients Discharged for Year ending December 31st, 1921.—continued.

	Males.	Females.	Total.	Cured.	Relieved.	I. S. Q.	Died.	Still m.
<b>I. GENERAL DISEASES.—continued.</b>								
43. Cancer and other malignant tumors of the breast .....	—	15	15	—	11	1	1	2
44. Cancer and other malignant tumors of the skin .....	24	—	24	5	10	7	2	2
45. Cancer and other malignant tumors of other organs and of organs not specified .....	52	18	70	12	33	15	8	2
46. Other tumors (tumors of the female genital organs excepted) .....	20	4	24	12	6	5	1	1
47. Acute articular rheumatism .....	60	43	103	27	57	2	1	16
48. Chronic rheumatism and gout .....	6	3	9	1	5	3	—	—
49. Scurvy .....	—	—	—	—	—	—	—	—
50. Diabetes .....	20	32	52	2	27	7	11	5
51. Exophthalmic goitre .....	1	7	8	1	7	—	—	—
52. Addison's disease .....	—	—	—	—	—	—	—	—
53. Leucæmia .....	3	5	8	—	2	3	3	5
54. Anæmia chlorosis .....	17	8	25	3	10	2	5	5
55. Other general diseases .....	1	4	5	2	—	3	—	—
56. Alcoholism (acute or chronic) .....	51	14	65	8	49	4	3	1
57. Chronic lead poisoning .....	—	—	—	—	—	—	—	—
58. Other chronic occupation poisonings .....	—	—	—	—	—	—	—	—
59. Other chronic poisonings .....	—	—	—	—	—	—	—	—
<b>II.—DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.</b>								
60. Encephalitis .....	3	3	6	—	3	—	3	—
61. Simple meningitis .....	7	2	9	1	1	—	6	1
61A. “ “ including cerebro spinal fever .....	—	—	—	—	—	—	—	—
62. Locomotor ataxia .....	8	3	11	—	7	4	—	—
63. Other diseases of spinal cord .....	24	6	30	1	16	11	2	2
64. Cerebral haemorrhage, apoplexy .....	21	14	35	1	7	4	21	2
65. Softening of the brain .....	—	—	—	—	—	—	—	—
66. Paralysis without specified cause .....	22	15	37	—	17	13	5	2
67. General paralysis of the insane .....	3	—	3	—	1	2	—	—
68. Other forms of mental alienation .....	13	25	38	2	9	23	2	2
69. Epilepsy .....	22	9	31	3	12	15	1	—
70. Convulsions, non-puerperal .....	—	—	—	—	—	—	—	—
71. Convulsions of infants .....	2	8	10	1	5	—	4	—
72. Chorea .....	10	14	24	2	16	6	—	—
73A. Hysteria .....	21	13	34	6	23	5	—	—
73B. Neuralgia and neuritis .....	28	28	56	7	29	18	—	2
74. Other diseases of the nervous system .....	—	—	—	—	—	—	—	—
75A. Follicular conjunctivitis .....	—	—	—	—	—	—	—	—
75B. Trachoma .....	13	19	32	1	24	—	7	—
75C. Other diseases of the eyes and their annexa .....	161	81	242	49	143	27	1	22
76. Diseases of the ears .....	30	16	46	14	26	1	—	5
<b>III.—DISEASES OF CIRCULATORY SYSTEM.</b>								
77. Pericarditis .....	1	—	1	—	—	—	—	—
78. Acute endocarditis .....	4	6	10	—	2	—	8	—
79. Organic diseases of the heart .....	74	35	109	1	49	4	47	8
80. Angina pectoris .....	—	—	—	—	1	—	—	—
81. Diseases of the arteries, arterio-rama, aneurism, etc. ....	31	6	37	—	17	10	10	—
82. Embolism and thrombosis .....	2	5	7	2	—	—	5	—
83. Diseases of the veins—Varices, haemorrhoids .....	66	54	120	69	34	6	1	10
84. Diseases of the lymphatic system, lymphangitis, etc. ....	6	4	10	4	6	—	—	—
85. Haemorrhage, other diseases of the circulatory system .....	6	5	11	2	8	1	—	—
<b>IV.—DISEASES OF RESPIRATORY SYSTEM.</b>								
86. Diseases of the nasal fossæ .....	8	5	13	3	9	—	—	—
87. Diseases of the larynx .....	7	5	12	2	9	—	1	2
88. Diseases of the thyroid body .....	—	9	9	—	5	—	2	2

*Classification of Diseases of Patients Discharged for Year ending December 31st, 1921.—continued.*

	Males.	Females.	Total.	Cured.	Relieved.	I. S. Q.	Died.	Still In
<b>V.—DISEASES OF RESPIRATORY SYSTEM—continued.</b>								
89. Acute bronchitis .....	12	9	21	5	15	—	1	—
90. Chronic bronchitis .....	23	26	49	18	24	3	3	1
91. Broncho-pneumonia .....	20	6	26	8	11	—	6	1
92. Pneumonia .....	130	61	191	87	50	4	40	10
93. Pleurisy .....	42	24	66	21	30	3	9	3
94. Pulmonary congestion, pulmonary apoplexy .....	—	—	—	—	—	—	—	—
95. Gangrene of the lung .....	—	1	1	—	—	—	1	—
96. Asthma .....	10	3	13	—	11	—	1	1
97. Pulmonary emphysema .....	4	—	4	—	2	—	2	—
98. Other diseases of respiratory system, tuberculosis excepted	15	11	26	5	15	1	3	2
<b>V.—DISEASES OF THE DIGESTIVE SYSTEM.</b>								
99A. Diseases of the teeth and gums .....	1	2	3	1	—	2	—	—
99B. Other diseases of the mouth and annexa .....	2	—	2	—	1	1	—	—
100. Diseases of pharynx .....	47	90	137	91	42	1	2	1
101. Diseases of oesophagus .....	—	—	—	—	—	—	—	—
102. Ulcer of the stomach .....	21	9	30	5	11	3	1	10
103. Other diseases of the stomach (cancer excepted) .....	64	42	106	21	69	10	2	4
104. Diarrhoea and enteritis under 2 years .....	—	—	—	—	—	—	—	—
105. Diarrhoea and enteritis, 2 years and over .....	31	14	45	18	18	1	4	4
105A. Including due to alcoholism .....	—	—	—	—	—	—	—	—
106. Ankylostomiasis .....	—	—	—	—	—	—	—	—
107. Intestinal parasites .....	—	—	—	—	—	—	—	—
108. Appendicitis and typhilitis .....	152	139	291	215	42	7	6	21
109. Hernia, intestinal obstruction .....	150	41	191	127	41	8	9	6
110A. Diseases of the anus and faecal fistulas .....	18	7	25	12	9	1	—	3
110B. Other diseases of intestines .....	8	7	15	3	9	2	1	—
111. Acute yellow atrophy of the liver .....	—	—	—	—	—	—	—	—
112. Hydatid tumor of the liver .....	12	6	18	2	9	1	2	4
113. Cirrhosis of the liver .....	4	4	8	—	3	1	1	3
113A. Including due to alcoholism .....	—	—	—	—	—	—	—	—
114. Biliary calculi .....	4	24	28	18	6	1	1	2
115. Other diseases of the liver .....	14	29	43	21	19	1	2	—
116. Diseases of the spleen .....	—	—	—	—	—	—	—	—
117. Simple peritonitis (non-puerperal) .....	9	29	38	13	12	3	8	2
118. Other diseases of the digestive system (cancer and tuberculosis excepted) .....	1	1	2	—	—	—	1	1
<b>VI.—NON-VENEREAL DISEASES OF THE GENITO URINARY SYSTEM AND ANNEXA.</b>								
119. Acute nephritis .....	6	5	11	2	7	2	—	—
120. Bright's disease .....	43	18	61	3	23	5	26	4
121. Chyluria .....	—	—	—	—	—	—	—	—
122. Other diseases of the kidney and annexa .....	30	32	62	15	32	11	1	3
123. Calculi of the urinary passages .....	14	15	29	10	14	1	1	3
124. Diseases of the bladder .....	14	21	35	10	16	4	4	1
125. Diseases of the urethra, urinary abscess, etc. ....	36	16	52	16	28	4	3	1
126. Diseases of the prostate .....	27	—	27	6	8	2	8	3
127. Non-venerereal diseases of the male genital organs .....	19	—	19	6	12	—	—	1
128. Uterine haemorrhage (non-puerperal) .....	—	4	4	—	1	3	—	—
129. Uterine tumors (non-cancerous) .....	—	34	34	26	2	2	3	1
130. Other diseases of the uterus .....	—	—	—	—	—	—	—	—
130A. Metritis .....	—	23	23	9	13	—	1	—
130B. Other diseases of the uterus .....	—	190	190	109	62	9	2	8
131. Cysts and other tumors of the female genital organs .....	—	38	38	27	5	1	2	3
132. Salpingitis and other diseases of female genital organs .....	—	118	118	59	46	2	2	9
133. Non-puerperal diseases of the breast .....	2	5	7	3	3	—	1	—

*Classification of Diseases of Patients Discharged for Year ending  
December 31st, 1921.—continued.*

*Classification of Diseases of Patients Discharged for Year ending December 31st, 1921.—continued.*

XIII.—AFFECTIONS PRODUCED BY EXTERNAL CAUSES.— <i>continued.</i>	Males.	Females.	Total.	Cured.	Relieved.	I. S. Q.	Died.	Still Im.
163. Other suicides .....	1	—	1	1	—	—	—	—
164. Poisoning by food .....	—	—	—	—	—	—	—	—
165A. Venomous bites and stings .....	2	1	3	3	—	—	—	—
165B. Other acute poisonings .....	4	3	7	4	3	—	—	—
166. Conflagration .....	8	6	14	6	5	—	1	2
167. Burns, conflagration excepted .....	—	—	—	—	—	—	—	—
168. Absorption of deleterious gases, conflagration excepted .....	—	—	—	—	—	—	—	—
169. Accidental drowning....	—	1	1	—	1	—	—	—
170. Traumatism by firearms .....	20	5	25	11	10	1	2	1
171. “ cutting or piercing instruments .....	27	1	28	12	14	1	1	—
172. Traumatism by fall .....	29	4	33	9	22	1	—	1
173. “ in mines and quarries .....	2	—	2	2	—	—	—	—
174. Traumatism by machines.....	6	—	6	3	2	—	—	1
175. “ other crushing .....	13	1	14	8	6	—	—	—
176. Injuries by animals .....	—	—	—	—	—	—	—	—
177A. Over-exertion .....	—	—	—	—	—	—	—	—
177B. Starvation .....	—	—	—	—	—	—	—	—
178. Excessive cold.....	—	—	—	—	—	—	—	—
179. Effects of heat.....	2	3	5	3	1	—	1	—
180. Lightning .....	—	—	—	—	—	—	—	—
181. Electricity, lightning excepted .....	—	—	—	—	—	—	—	—
182. Homicide by firearms .....	—	—	—	—	—	—	—	—
183. Homicide by cutting or piercing instruments .....	—	—	—	—	—	—	—	—
184. Homicide by other means ...	—	—	—	—	—	—	—	—
185A. Dislocations .....	9	4	13	5	6	—	—	2
185B. Sprains .....	4	1	5	1	3	1	—	—
185C. Fractures, cause not specified .....	176	40	216	86	80	5	20	25
186. Other external violence .....	87	12	99	43	47	3	1	5
Grand total.....	2,916	2,476	5,392	1,925	2,107	561	449	350

**APPENDIX No. 4.  
OPERATIONS FOR 1921.**

**OPERATIONS ON EAR, NOSE, AND THROAT.**

Removal of adenoids or tonsils .....	256
Drainage of antrum of Highmore.....	6
Nasal polypus, removal of .....	26
Excision of turbinals .....	95
Operation for deflected septum.....	22
Operation on mastoid antrum.....	33
Nasal spine .....	—
Aural polypus.....	4
Unclassified .....	33
Tracheotomy.....	1

**OPERATIONS ON THE EYE.**

Operation for—Cataract.....	24
Strabismus .....	11
Lachrymal obstruction .....	8
Tarsectomy .....	17
Excision.....	24
Evisceration .....	2
Corneal section .....	6
Peritomy .....	4
Iridectomy .....	4
Entropion and ectropion .....	18
Canthoplasty .....	13
Chalazion .....	1
Curettage .....	6
Pterygium .....	9
Posterior sclerotomy .....	21
Unclassified.....	9
Removal of foreign body .....	4

**APPENDIX No. 4.—Operations for 1921—continued.**

**OPERATIONS ON THE THORAX.**

Drainage of empyema.....	22
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**OPERATIONS ON THE ABDOMEN.**

Laparotomy for—	
Appendicostomy .....	2
Appendicectomy or drainage .....	253
Gastro-enterostomy .....	23
Operations on bile ducts and gall bladder .....	48
Colotomy .....	6
Relief of intestinal obstruction .....	6
Enterostomosis .....	4
Exploratory laparotomy .....	39
Gastrostomy .....	1
Gastric and duodenal ulcer .....	9

**GYNÆCOLOGICAL OPERATIONS.**

Cæsarean section .....	3
Operation for ectopic gestation .....	14
Operations for uterine displacements .....	155
Hysterectomy .....	25
Salpingo-oophorectomy or salpingectomy .....	124
Ovarian and parovarian cysts, removal of .....	26
Plastic operations on cervix and perinæum .....	176
Posterior colpotomy .....	91
Curettage .....	493
Vaginal examination .....	22
Unclassified .....	20
Myomectomy .....	9

**OPERATIONS FOR GENITO-URINARY ORGANS.**

Nephrectomy .....	6
Nephrotomy .....	8
Nephropexy .....	2
Cystotomy .....	18
Cystoscopy .....	36
Prostatectomy .....	21
Urethrotomy .....	14
Urethral dilatation and catheterisation .....	5
Circumcision .....	1
Radical cure of—	
Hydrocele .....	8
Varicocele .....	8
Undescended testis .....	2
Removal of testicle .....	4

**OPERATIONS ON RECTUM AND ANUS.**

Operation for haemorrhoids .....	33
“ fistula in ano .....	18
“ fissure in ano .....	8
“ ischio-rectal abscess .....	8
Rectal examinations under anaesthetic .....	7
Rectal prolapse .....	1

**HERNIA.**

Radical cure of—	
Inguinal hernia .....	141
Femoral hernia .....	7
Ventral hernia .....	11
Strangulated hernia .....	11

**OPERATIONS ON BONE.**

Laminectomy .....	3
Trephining skull .....	13
Sequestrotomy .....	11
Reduction of fractures .....	6
“ “ by open method .....	15
Excision or osteotomy .....	12
Amputations of—	
Arm .....	5
Hand or fingers .....	12
Thigh or leg .....	14
Foot or toes .....	10

APPENDIX No. 4.—*Operations for 1921—continued.*

## OPERATIONS ON JOINTS.

Reduction of dislocations under anaesthesia .....	5
Arthrotomy.....	9
Excision.....	9

## MISCELLANEOUS OPERATIONS.

Suturing of wounds and tendons .....	18
Removal of foreign bodies .....	2
Drainage of abscesses .....	43
Breaking down adhesions.....	3
Operations for bursitis .....	4
Examinations under anaesthesia .....	3
Skin-grafting.....	5
Examining sinuses .....	4
Removal of enlarged lymphatic glands for various causes .....	20
Tenotomy .....	3
Removal of toenail .....	3
Unclassified operations .....	47
Nerve suture .....	2
Cautery .....	6
Removal of gasserian ganglion .....	1
Plastic operation on face and jaw .....	14
Bone grafting .....	5

## OPERATIONS ON BLOODVESSELS.

Removal of varicose veins .....	15
Other operations on blood vessels .....	2
Blood transfusion .....	7

## OPERATIONS FOR DISEASES CAUSED BY ANIMAL PARASITES.

Hydatid of liver.....	4
Other organs.....	2

## DENTAL OPERATIONS .....

OPERATIONS FOR REMOVAL OF TUMORS.	
<i>Malignant tumors of skin .....</i>	14
"    "    lips .....	12
"    "    tongue .....	10
"    "    jaw .....	4
"    "    penis.....	4
"    "    rectum .....	—
"    "    breast.....	15
"    "    other organs .....	13

*Benign Tumors—*

Dermoid .....	—
Goitre (including exophthalmic) .....	7
Papilloma .....	3
Adenoma .....	4
Fibroma .....	2
Lipoma .....	5
Cysts .....	4
Other tumors .....	8
Tracheotomy .....	4

## X-RAY DEPARTMENT.

The work in the X-Ray Department continues to increase, as is evidenced by the number of radiographs taken during the year, viz., 3,295, distributed as follows:—Out-patient department, 556; Adelaide ward, 348; Albert ward, 343; Light ward, 240; Faith ward, 283; Beatrice ward, 20; Martin ward, 340; Victoria ward, 364; Dorcas ward, 246; Alfred ward, 56; Flinders ward, 124; Ophthalmic ward, 54; Theatre ward, 7; Alexandra ward, 152; Hope ward, 14; daCosta ward, 16; Leopold ward, 110; Wyatt ward, 10; Nurses' sick room, 12; total, 3,295.

Considering the existing conditions of want of space, lack of accessory apparatus, and understaffing, the work of the department has been good, but not up to the standard that should prevail in a large institution. It is hoped that these needs will be supplied in the near future.

Owing to the wants noted above and in order to cope with the increasing demand for radiographic work, it has been necessary to temporarily discontinue most of the radiotherapeutic work.

## MEDICAL ELECTRIC DEPARTMENT.

The number of patients treated were:—

In-patients .....	43
Out-patients .....	38
Treatments given .....	1,566
Daily average .....	10

Separate cases treated, 81, made up as follows:—

Reactions tested .....	16
Paralysis .....	20
Neuritis.....	11
Fracture .....	5
Rheumatism.....	11
Muscular weakness .....	9
Various .....	9
Patients under treatment in Hospital, December 31st, 1921 (2 in, 15 out) .....	17

## MASSAGE DEPARTMENT.

The number of patients treated were:—

In-patients .....	204
Out-patients .....	136

Total .....	340
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Average number of patients each day (3 days a week) ..	38
--	----

The actual treatment given numbered.....	6,696
--	-------

Patients under treatment in Hospital, December 31st, 1921 (11 in and 32 out) .....	43
--	----

Cases treated were as follows:—

Fractures .....	145
Loss of muscular tone .....	17
Sprains and injuries .....	68
Paralysis .....	26
Rheumatism .....	44
Neuritis.....	12
Various .....	28

During the year this department was reorganised. A resident masseuse and three part-time assistants were appointed. Additions to the equipment have also been made.

Since September 1st a daily average of 13 patients (indoor) have been treated.

APPENDIX No. 5.—*Life Contributions.*

	1870.	£ s. d.
Advertiser Companionship, Waymouth Street.....	20	0 0
	1872.	
Rounsevell, W. B., Grenfell Street .....	20	0 0
	1874.	
Waterhouse, J., Executors of .....	100	0 0
	1875.	
Maclean, Donald, Prospect Hall .....	20	0 0
	1877.	
Port Adelaide Working Men's Association .....	52	10 0
	1878.	
Port Adelaide Working Men's Association .....	26	5 0
South Australian Football Association .....	20	0 0
	1879.	
Clark, William, Angaston .....	20	0 0
Port Adelaide Working Men's Association .....	26	5 0
	1880.	
Port Adelaide Working Men's Association .....	25	0 0
Thorngate, William, Trustees of (care Hon. C. C. Kingston)	30	0 0
	1881.	
Port Adelaide Working Men's Association .....	25	0 0
Wooldridge, A. M., Currie Street .....	20	10 0
	1882.	
Hales Bros., Currie Street .....	20	0 0
Samuel J. Jacobs, of Jacobs, Chas., & Sons, Currie Street	20	0 0
Rounsevell, Hon. W. B., Grenfell Street .....	30	0 0
	1883.	
d'Arcy-Varna, Constance Emblyn .....	20	0 0
	1885.	
Simpson, A., & Son, Gawler Place .....	100	0 0
	1888.	
Weidenhofer, J. H. ....	20	0 0
Wm. Burford, of Burford, W. H., & Sons .....	100	0 0
	1890.	
Barker, Alfred James .....	20	0 0
Stock, W. F. (executors of the late H. L. Vosz) .....	20	0 0
	1892.	
Waterhouse, L. ....	200	0 0
S.A. Jockey Club.....	20	0 0
	1894.	
Wm. Pile (S.A. Jockey Club) .....	20	0 0
	1895.	
T. F. Wigley (S.A. Jockey Club) .....	20	0 0
	1897.	
H. Dodds (Central Broken Hill S.M. Coy., in liquidation) ..	50	0 0
W. Brindal (Australian Natives' Association) .....	21	0 0

APPENDIX No. 5.—*Life Contributions—continued.*

	1902.	£ s. d.
W. Clark .....	25	0 0
L. G. Robinson .....	25	0 0
W. C. A. Lodge (S.A.R. Hospital Fund) .....	21	0 0
J. P. Thomas (S.A.R. Hospital Fund) .....	21	0 0
G. W. Ward (S.A.R. Hospital Fund) .....	21	0 0
	1903.	
T. French (S.A.R. Hospital Fund) .....	20	0 0
	1904.	
W. C. Williams (S.A.R. Hospital Fund) .....	26	10 6
W. Davies (S.A.R. Hospital Fund) .....	26	10 6
P. Worth (Worth Bros.) .....	20	0 0
	1905.	
H. Wyatt (S.A.R. Hospital Fund) .....	21	9 4
G. D. Clarke (S.A.R. Hospital Fund) .....	21	9 4
J. Dunn (S.A.R. Hospital Fund) .....	21	9 4
	1906.	
J. W. Spurr (S.A.R. Hospital Fund) .....	28	17 6
S. Crowley (S.A.R. Hospital Fund) .....	28	17 6
	1907.	
D. W. Fisher (S.A.R. Hospital Fund) .....	22	9 6
W. J. Ross (S.A.R. Hospital Fund) .....	22	9 6
W. H. Carpenter (S.A.R. Hospital Fund) .....	22	9 6
S. James (S.A.R. Hospital Fund) .....	22	9 6
	1908.	
Barker, John (S.A. Jockey Club) .....	20	0 0
Ware, A. W. (Tattersall's Racing Club) .....	21	0 0
Cruickshank, R. (Port Adelaide Racing Club) .....	20	0 0
Slavin, E. W. (S.A.R. Hospital Fund) .....	21	9 0
Stan'ey, M. J. (S.A.R. Hospital Fund) .....	21	9 0
Phillips, C. (S.A.R. Hospital Fund) .....	21	9 0
Kemptoh, W. (S.A.R. Hospital Fund) .....	21	9 0
	1909.	
Goudie, Peter (Port Adelaide Racing Club) .....	20	0 0
Gun, T. R. (Port Adelaide Racing Club) .....	20	0 0
Lewis, Harry (Port Adelaide Racing Club) .....	20	0 0
	1911.	
Howie, R. E. (Port Adelaide Racing Club) .....	20	0 0
Brown, John Norton .....	20	0 0
"M.A.M." .....	20	0 0
	1912.	
Benson, Dr. A. V. (Port Adelaide Racing Club) .....	20	0 0
Sobels, T. O. (Port Adelaide Racing Club) .....	20	0 0
	1913.	
Cutten, A. C. (Port Adelaide Racing Club) .....	20	0 0
Hills, Miss Annie R. .....	20	0 0
	1914.	
Pullman, S. J. (Port Adelaide Racing Club) .....	20	0 0
	1918.	
Walkley, Helen May .....	25	0 0
	1919.	
Lynch, Dr. A. F. A. (Port Adelaide Racing Club) .....	20	0 0
	1920.	
Waller, T. J. (Port Adelaide Racing Club) .....	20	0 0
Slade, H. (Port Adelaide Racing Club) .....	20	0 0
	1921.	
Pullman, S. J. (Port Adelaide Racing Club) .....	20	0 0
Heseltine, S. R., jun. (Adelaide Racing Club) .....	20	0 0

*Amounts Paid to the Commissioners of the Adelaide Hospital during the Year 1921.*

	£ s. d.
Balaklava Racing Club .....	1 1 0
Cave, W. R., & Co. ....	1 1 0
District Councils of—	
Nairne .....	1 1 0
Port Elliot .....	1 1 0
Port Wakefield .....	1 1 0
Talunga .....	1 1 0
Wallaroo .....	1 1 0
Yatala North .....	1 1 0
Hospital boxes .....	8 18 11
McBean, Mrs. ....	0 5 0
McCartin, M. ....	1 0 0
Smith, C. R. ....	1 0 0
Spry, J. R. ....	1 0 0
Storemen and Packers' Union .....	1 1 0
Thorngate's Estate .....	30 0 0
Ward, S. C., & Co. ....	1 1 0

*Contributions Received during 1921.*

	£ s. d.
Aborigines' Department .....	10 10 0
Abotomey, A., & Sons .....	5 0 0
Adelaide Electric Tramways Club .....	10 0 0
" Fruit and Produce Exchange Coy., Limited .....	2 0 0
" Racing Club, £10, £10, £5 .....	25 0 0
" Steamship Company, Limited .....	10 10 0
Ah Fong and others .....	21 17 0
Australian Postal Electricians' Union, S.A. Branch .....	2 2 0
Bank of Australasia .....	10 10 0
" New South Wales .....	5 5 0
" Union, of Australia .....	5 5 0
Bell, Jas., & Co., Propty., Limited .....	2 2 0
Birks, Chas., & Co. ....	2 2 0
Bowman, Keith D. ....	5 0 0
Boilermakers' Society .....	3 3 0
Brickyards Union .....	2 2 0
Clarkson, Ltd. ....	2 0 0
Colonial Sugar Refining Company .....	10 10 0
Colton, Palmer, and Preston, Limited .....	2 2 0
Conrad, L. ....	2 0 0
Corporation of—	
Clare .....	2 2 0
Gawler .....	2 2 0
Goolwa .....	2 2 0
Hindmarsh .....	2 2 0
Kensington and Norwood .....	10 10 0
Peterborough .....	5 5 0
Thebarton .....	2 2 0
Unley .....	5 0 0
Crooks & Brooker, Limited .....	2 0 0
Dalgety & Co., Limited .....	2 2 0
Darling, J., & Son .....	2 2 0
District Council of—	
Aldinga .....	2 2 0
Angas .....	2 2 0
Balaklava .....	2 2 0
Blanchetown .....	2 2 0
Bremer .....	2 2 0
Brinkley .....	2 2 0
Campbelltown .....	2 2 0
Caurnamont .....	2 2 0
Clarendon .....	2 2 0
Clinton .....	2 2 0
Crafers .....	2 2 0
Dublin .....	2 2 0
East Torrens .....	2 2 0
Elliston .....	2 2 0
Hall .....	2 2 0
Kadina .....	2 2 0
Kingscote .....	2 2 0

*Contributions Received during 1921—continued.*

	£ s. d.
District Councils of—continued.	
Kondoparinga .....	2 0 0
Ninnes .....	2 2 0
Mitcham .....	2 2 0
Mount Crawford .....	2 2 0
Mudla Wirra North .....	2 2 0
Munno Para West .....	2 2 0
Onkaparinga .....	2 2 0
Payneham .....	2 2 0
Prospect .....	2 2 0
Rapid Bay .....	2 2 0
Saddleworth .....	2 2 0
Springton .....	2 2 0
Stirling .....	2 2 0
Tatiara .....	3 3 0
Tungkillo .....	2 2 0
Walkerville .....	2 2 0
Woodville .....	3 3 0
Yorke Peninsula .....	2 2 0
Daw, Edwin .....	2 2 0
Desmunda Singh .....	5 0 0
Duncan & Fraser, Limited .....	5 0 0
Druids' Grand Lodge .....	2 2 0
Edment's Cash Stores .....	4 6 0
Elder, Smith, & Co., Limited .....	10 10 0
Federated Moulder's Union .....	2 0 0
Federated Seamen's Union .....	10 0 0
Fire Brigades Board .....	10 10 0
Fowler, D. & J., Limited .....	10 10 0
Gawler Jockey Club .....	8 0 0
George, W. J. ....	3 0 0
Globe Timber Mills Company .....	2 2 0
Goldsmith, R. ....	4 10 0
Goode, Durrant, & Co., Limited .....	2 2 0
Grand Lodge of Freemasons .....	5 5 0
Haines .....	5 0 0
Hall, G., & Sons .....	2 2 0
Howard Smith, Limited .....	10 0 0
International Harvester Co. of Australia, £2 2s., £2 .....	4 2 0
Islington Division Locomotive and Carriage Works Sick and Accident Fund .....	2 0 0
Jesuit Fathers, Norwood .....	2 2 0
Lodge of St. John, No. 15, S.A.C. ....	2 0 0
Martin, C. H. & A. ....	2 2 0
Martin, John, & Company, Limited .....	2 2 0
McIlwraith, McEacharn .....	2 2 0
Metropolitan Abattoirs Board .....	2 0 0
Milne, George .....	10 0 0
Motteram, C. A., & Sons .....	2 2 0
Municipal Tramways Trust .....	10 0 0
Muth, G. A. ....	2 2 0
Mutooroo Pastoral Company, Limited .....	5 5 0
Najar, J. ....	3 3 0
Onkaparinga Racing Club .....	15 5 0
Pengelley, A., & Company .....	2 2 0
Port Adelaide Co-operative Accident Relief Society .....	5 0 0
Port Adelaide Racing Club .....	10 10 0
Port Adelaide Working Men's Association .....	21 0 0
Reid, Robt., & Co., Limited .....	2 2 0
Richman, J. M. ....	2 2 0
Ricketts (Overseas) Ltd. ....	5 5 0
Rising Star Tent, I.O.R. (Frank Page, sec.) .....	2 2 0
Rose of Sharon Lodge .....	3 3 0
Sands & McDougall .....	2 2 0
Seppelt, B., & Sons, Limited .....	2 0 0
S.A. Brewing Company, Limited .....	3 3 0
S.A. Gas Company .....	5 5 0
S.A. Jockey Club .....	20 0 0
S.A. Railway Hospital Fund .....	261 17 9
S.A. Stevedoring Company, Limited .....	5 0 0
Wertheim, H. Proprietary, Limited .....	2 2 0
White, Jas. ....	5 0 0
Wilkinson & Company, Limited .....	5 0 1
Williamson, E., & Co., Ltd. ....	2 2 0
Wood, G., Son, & Company .....	10 0 0
Woodroffe, W. ....	3 3 0

## ADELAIDE HOSPITAL.

STATEMENT OF ACCOUNTS FOR THE YEAR ENDED DECEMBER 31ST, 1921, IN TERMS OF THE HOSPITALS ACT,  
No. 306 OF 1884, SECTION 3.

RECEIPTS.	£ s. d.	EXPENDITURE.	£ s. d.
Contributions .....	845 11 10	Salaries, contingencies ( <i>i.e.</i> medicines, provisions, &c.)—	
" 10 per cent. on life contributions .....	215 11 4	Adelaide Hospital .....	64,626 16 4
" Commissioners' account .....	52 13 11	Consumptive Home .....	5,918 3 1
Fees—Adelaide Hospital .....	2,630 6 8	Infectious Diseases Block .....	5,137 11 3
Consumptive Home .....	688 9 6	Bacteriological Block .....	2,970 12 4
Infectious Diseases Block.....	3,732 4 0	Department of Dentistry .....	644 3 1
Bacteriological Block .....	2,301 9 5		
Department of Dentistry .....	50 17 3		
Revenue from other sources .....	1,600 5 1		
H.M. Government.....	67,179 17 1		
	£79,297 6 1		£79,297 6 1

Under the provisions of the Hospitals Act Amendment Act of 1921, the existing board retires on February 28th, 1922.

January 9th, 1922.

R. S. ROGERS, Deputy Chairman.

## COMMISSIONERS OF CHARITABLE FUNDS.—ADELAIDE HOSPITAL.

ABSTRACT of RECEIPTS and EXPENDITURE of the COMMISSIONERS of CHARITABLE FUNDS in account with the ADELAIDE HOSPITAL for the YEAR ENDED JUNE 30th, 1921.

	RECEIPTS.				EXPENDITURE.		
	To June 30th, 1920.	To June 30th, 1921.	Total.		To June 30th, 1920.	To June 30th, 1921.	Total.
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	£ s. d.	£ s. d.
To Sundry bequests, contributions, rents, and unclaimed patients' fees	18,341 18 10	58 18 5	18,400 17 3	By Payments for building additions, &c., to Adelaide Hospital .....	40,653 9 4	—	40,653 9 4
Special contributions reimbursed by H.M. Government .....	839 17 8	—	839 17 8	Succession duty (Wansborough bequest) ....	59 14 9	—	59 14 9
Office furniture, Sale of Thos. Martin's bequest— Proportion of capital received from trustees .....	6 13 6	—	6 13 6	Succession duty (William Shierlaw's bequest) .....	—	135 2 3	135 2 3
Rents collected by Commissioners ....	21,200 0 0	—	21,200 0 0	Refund of contributions to Amin Chand ....	50 0 0	—	50 0 0
Interest on investments, etc.	15,814 15 2	—	15,814 15	Interest (premium and discount on bonds, &c.) .....	31 18 3	—	31 18 3
S.A. Government securities and State Bank bonds .....	19,089 5 1	2,839 0 1	21,928 5 2	Office furniture .....	30 0 0	—	30 0 0
S.A. Government inscribed stock .....	2,302 19 4	—	2,302 19 4	Martin's bequest— Payment to Children's Hospital on subdivision of estate .....	650 0 0	—	650 0 0
S.A. Government Treasury, trust account..	254 19 9	45 0 0	299 19 9	Land tax on portions of town acre 86 .....	1,030 3 10	200 1 8	1,230 5 6
S.A. Government Treasury, Endowment Fund .....	10,690 5 3	1,965 18 6	12,656 8 9	Additions and improvements to buildings on town acre 86 .....	2,500 0 0	—	2,500 0 0
Adelaide Corporation bonds .....	1,125 19 1	716 9 0	1,842 8 1	Proportion of Commissioners' fees .....	524 3 0	60 13 9	584 16 9
Premiums on corporation bonds sold .....	4,294 10 0	—	4,294 10 0	Clerical services .....	665 17 2	36 19 4	702 16 6
Bank deposits and Savings Bank .....	27 10 0	—	27 10 0	Sundry expenses (including law costs) .....	163 19 0	52 17 3	216 16 3
Commonwealth war loan inscribed stock..	2,195 2 9	—	2,195 2 9		£ 46,359 5 4	485 14 3	46,844 19 7
	50 0 0	19 0 0	69 0 0				
	£ 96,233 16 5	5,644 6 0	101,878 2 5	Department of Dentistry— Proportion of Commissioner's fees and clerical services .....	—	27 17 9	27 17 9
Department of Dentistry, Donation from British Red Cross Society ..	15,000 0 0	—	15,000 0 0		£ 46,359 5 4	513 12 0	46,872 17 4
Interest at 5½ per cent. thereon .....	—	796 2 7	796 2 7				
	£ 111,233 16 5	6,440 8 7	117,674 5 0	Balance on June 30th, 1921—			
				S.A. Government Treasury—Trust account .....	37,820 1 6		
				S.A. Government Treasury—Trust account, Department of Dentistry .....	15,768 4 10		
				S.A. Government Treasury—Adelaide Hospital Endowment Fund, under Act 1209, 1915 .....	15,523 14 4		
				Commonwealth war loan, 1925, at 4½ per cent. ....	200 0 0		
				Commonwealth war loan, 1927, at 5 per cent. ....	200 0 0		
				S.A. Government inscribed stock, at 5 per cent., due August 1st, 1924 .....	200 0 0		
				S.A. Government inscribed stock, at 5 per cent., due February 15th, 1924 .....	200 0 0		
				S.A. Government inscribed stock, at 5 per cent., due April 15th, 1924 .....	500 0 0		
				Bank of Adelaide—Current account .....	291 0 6		
				Cash in hand and petty cash .....	28 6 6		
					70,801 7 8		
					£ 117,674 5 0		

Other property held.—Thos. Martin's bequest—Town acre 86, situated on the south-western corner of Rundle and Pulteney Streets, with the buildings thereon leased to various persons.

January 11th, 1921.

P. WHITINGTON,  
E. M. SMITH,  
THOMAS GILL, } Commissioners.

In conformity with section No. 23 of Act No. 1078 of 1912, I have the honor to report that I have audited the accounts of the Commissioners of Charitable Funds in connection with the Adelaide Hospital, and examined the securities, deeds, and pass-books, and found them correct.

August 19th, 1921.

EDGAR WM. GILES, Commissioner of Audit.

#### ADELAIDE HOSPITAL.

The Commissioners hold on account of the Adelaide Hospital Endowment Fund the freehold of town acre 86, situated on the south-western corner of Rundle Street and Pulteney Streets, with the buildings thereon, which are leased to various persons at an annual rent of £2,880. The value of this property has considerably increased since it was transferred to the Commissioners in 1913 by the Trustees of the late Thomas Martin, the estimated value at that time for taxation purposes was £45,438. The State land tax assessment of the unimproved value of the land on August 1st, 1920, amounted to £67,730, being an increase of £22,292 on the unimproved value. The Commissioners have during the year made several inspections of the premises referred to above, and where necessary, notices were given to the lessees to have certain repairs and renovations effected. These have been carried out by the lessees concerned, with the exception of portions of the buildings subleased by one of the lessees, which are still in an unsatisfactory state; but the lessee has recently expressed his intention of having the required work done without any further delay.

The Commissioners have in several of their annual reports referred to the very considerable increase in income that can be obtained from town acre 86 by the erection of first-class modern business premises thereon in lieu of the present old and obsolete buildings. They have the necessary powers to do this, with the consent of the Controlling Minister, under section 7 of Act 1209 of 1915. The cost of building is gradually becoming less expensive, and in the near future the Commissioners consider that they will be justified

in submitting the plans and specifications for the proposed improvements to the Hon. the Chief Secretary.

Two leases of portions of this town acre, having a frontage of 58ft. to Rundle Street, will be terminable after September, 1921, on six months' notice, and this frontage can therefore be made available for building purposes. The adjoining 60ft. frontage is held under a lease having 62 years to run, and the Commissioners desire, if reasonable terms can be secured, to purchase the surrender of this lease, so that the extra frontage may also become available for any scheme of general improvements. The Crown Solicitor, however, advises that the Commissioners have no power to use the funds under their control in such a manner; they therefore suggest that the necessary Parliamentary authority be obtained by an amending Act to enable them to purchase the surrender of any lease of which they are or may become the lessors, the acquisition of which in their opinion would be for the benefit of any property vested in them.

#### ADDITIONS AND REPAIRS TO THE ADELAIDE HOSPITAL.

The necessary appropriation by Parliament of £30,000 for additions, etc., to the Adelaide Hospital is included in the Public Purposes Loan Act of 1920, and was voted on the Loan Estimates for 1920-21. The amount has been transferred from the Loan Fund to a special deposit account entitled "Repairs and Additions to the Adelaide Hospital under Act 1209/15." The expenditure on the works will be debited to this account, and the Commissioners will pay the Government 5 per cent. per annum for 30 years on the £30,000, in accordance with section 6 of Act 1209/15.

### DEPARTMENT OF DENTISTRY.

#### REPORT FOR YEAR ENDING DECEMBER 31ST, 1921.

On January 1st, 1921, the Department of Dentistry was established in temporary premises by conversion of the Military Dental Department in the Old Exhibition Buildings at Frome Road.

#### OFFICERS.

Mr. T. D. Campbell was appointed House Dental Surgeon. On April 1st the appointment of dental superintendent was accomplished. For the present it was not considered necessary to appoint a full time officer to this position, and a special appointment was made—the services of Dr. Arthur Chapman were secured. Following this, Mr. N. C. Staples was appointed to the position of clerk and store-keeper.

#### HONORARY OFFICERS.

Five honorary dental surgeons were appointed to the department during 1921, viz.:—Dr. Theo Shanasy, Dr. P. R. Newling, Dr. E. Millhouse, Dr. Arthur Chapman, and Mr. F. M. Swan. During the absence of Dr. Newling, on leave, Dr. L. W. Trott was appointed a temporary hon. dental surgeon, and later was appointed Hon. Dental Surgeon, *vice* Dr. Shanasy, who resigned on account of ill-health.

#### SENIOR DENTAL MECHANIC.

The greatly increased work of the Prosthetic Department made it necessary to make the appointment of a senior dental mechanic. Authority for and the appointment of Mr. Colin E. Joyner to this position has been secured.

Application was made in April for a porter. This, unfortunately, was not granted, but a charwoman was engaged for one half-day daily. This, while partially serving the purpose, does not fully cover the requirement, and the appointment of a full time porter, and also a nursing attendant (female), is a matter for serious consideration for the coming year.

#### STUDENTS.

Twenty-four students in the Dental Course of the University of Adelaide were admitted to the course of instruction and practice of this department during the year.

#### EQUIPMENT.

The equipment and furnishing of the department has been gradually augmented and greatly improved. Our thanks are due to Messrs. Claudius Ash & Sons, Ltd., of London, for their generous gift of two dental operating chairs.

#### ADVISORY SUB-COMMITTEE.

To this sub-committee the name of Dr. A. G. Trott has been added, and the conscientious work performed by this body is greatly appreciated.

#### NEW BUILDING.

We are pleased to report that the foundations of the new Dental Hospital are nearing completion.

This building will be situated in the north-west corner of the Hospital Grounds facing Frome Road.

#### DENTAL OPERATIONS.

The dental operations for year ending 1921 are as under:—

1. No. of patients examined .....	461
2. No. of extractions performed (including 116 general anaesthetic cases) .....	1,905
3. No. of fillings.....	493
4. No. of treatments .....	318
5. No. of inlays inserted.....	43
6. No. of erowns inserted .....	2
7. No. of special appliances (splints) .....	2
8. No. of bridges inserted .....	3
9. No. of artificial dentures inserted .....	175
10. No. of repairs to dentures .....	22
11. The number of attendances for the year totalled.....	1,684
12. The number of patients admitted to the department for treatment totalled .....	434
13. The number of patients discharged as dentally fit totalled .....	251

#### DENTAL FEES RECEIVED.

The fees received for work performed from July 1st amounted to £50 17s. 3d.

#### EXPENDITURE.

Amount expended from July 1st was £644 3s. 1d.

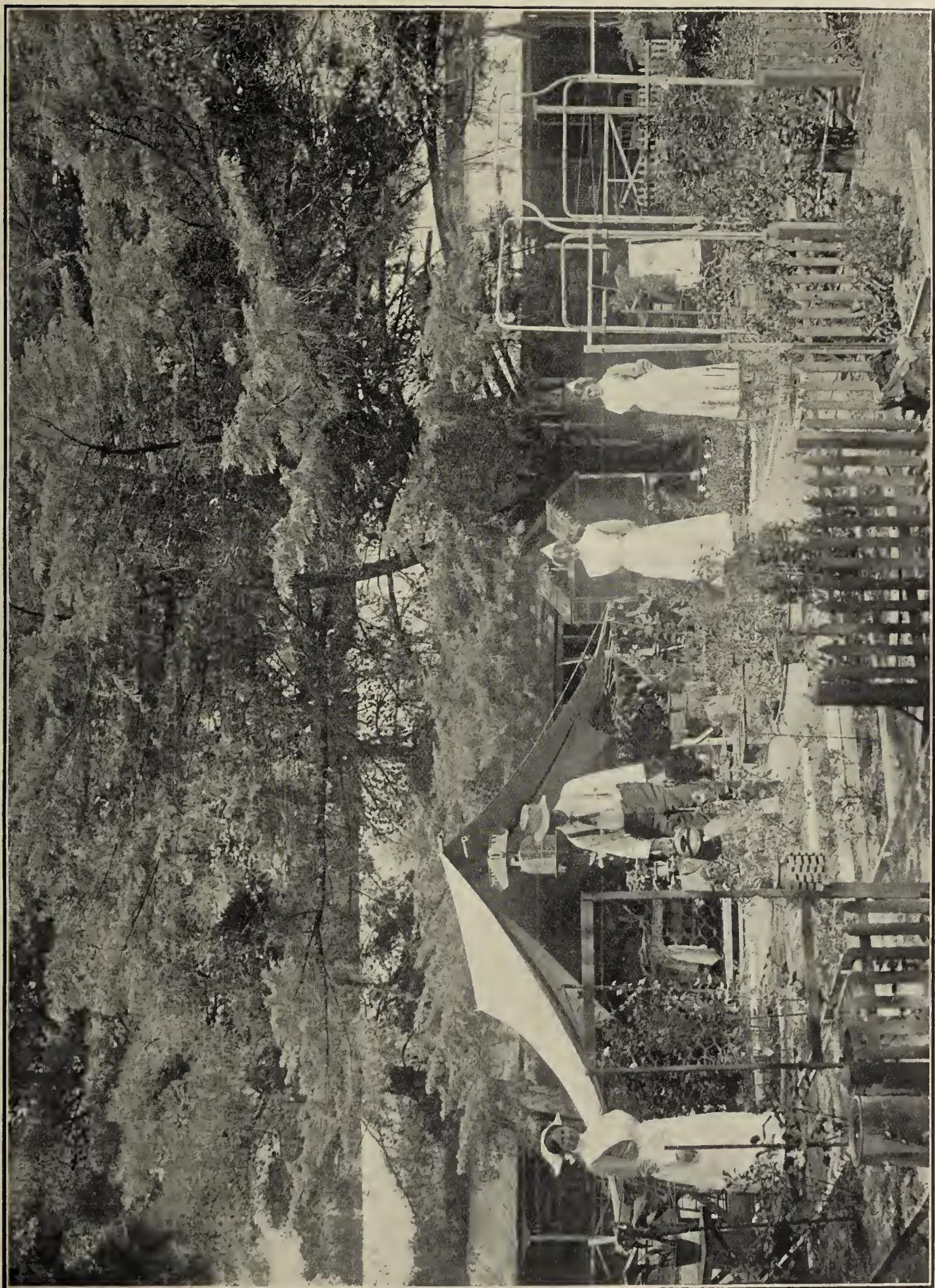
#### GENERAL REMARKS.

The work of the department has increased markedly in 12 months, the greatest increase being noticeable in the Prosthetic Section. By far the greatest bulk of the work has been done for patients of the first class, viz., "Treatment to the poor who are unable to pay fees." Of 434 patients, 345 were admitted for free treatment. The total gross estimate at full fees is £691 2s., of this, £550 13s. 6d. full fee value has been given to the public free of cost. The 89 patients paying fees (at various rates) to the value of £140 8s. 6d.

Yours faithfully,  
ARTHUR CHAPMAN, Dental Superintendent.

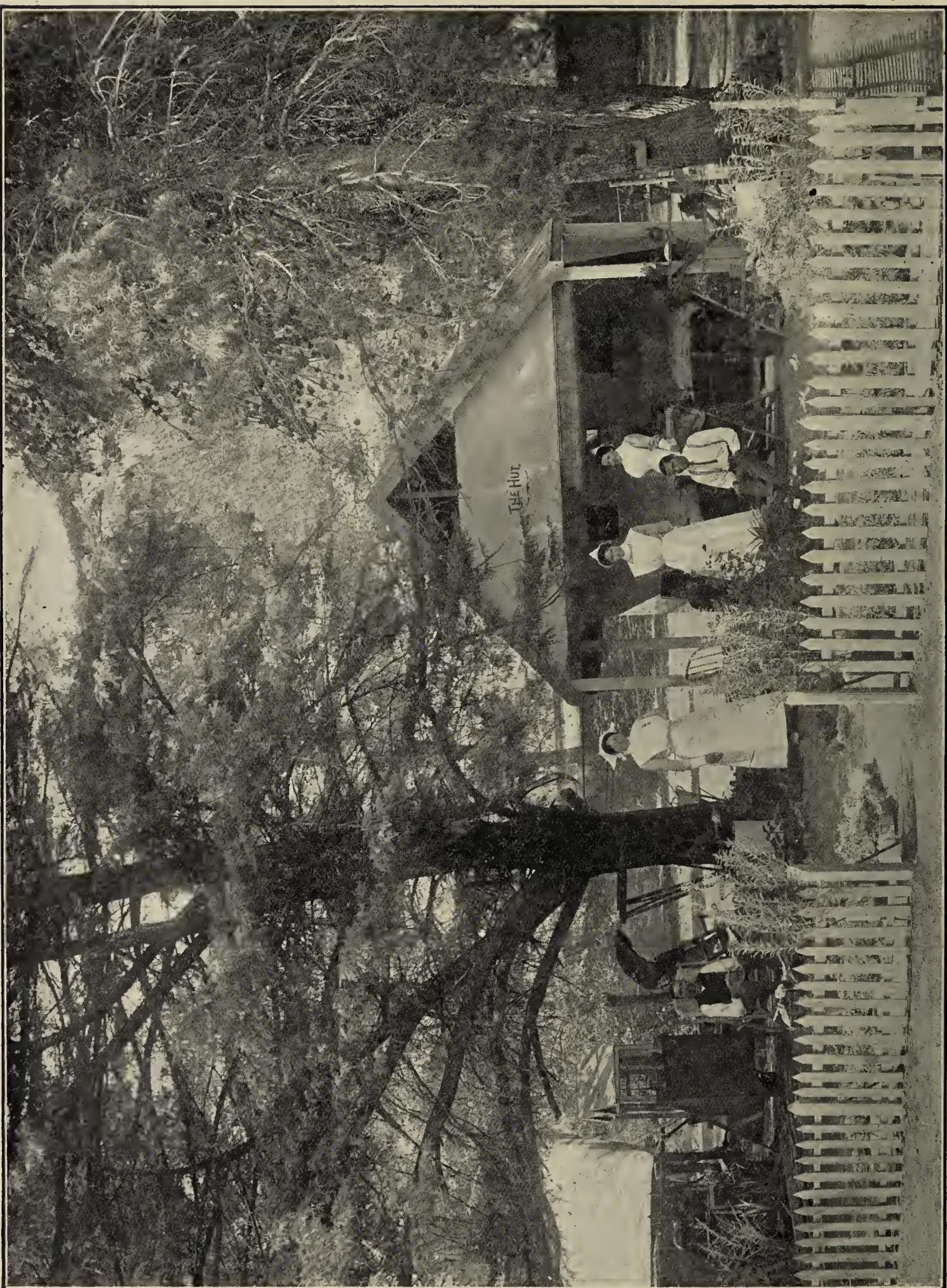
CONSUMPTIVES' HOME (In the Garden).

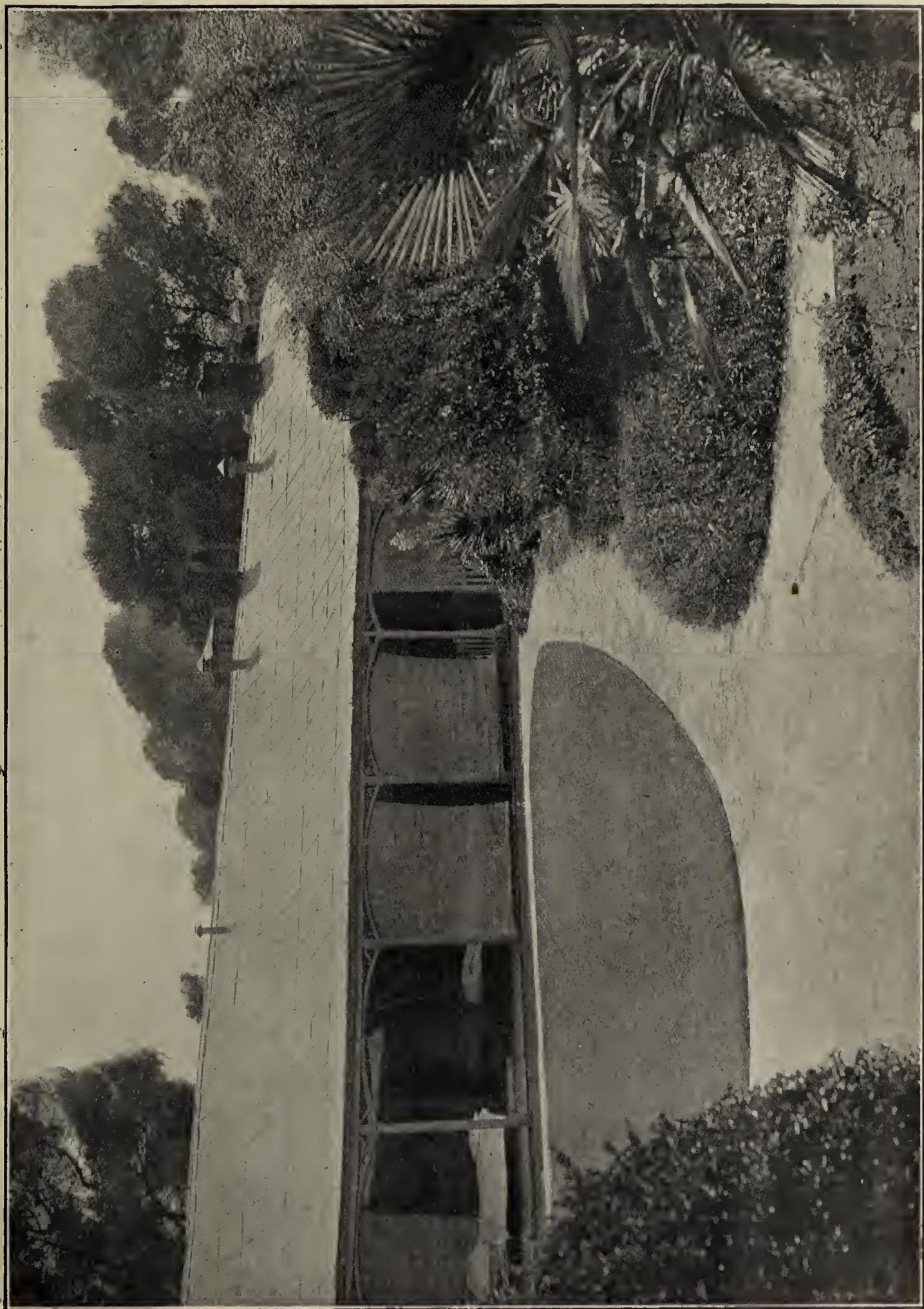
(p. 20—1)



CONSUMPTIVES' HOME (In the Garden).

(p. 20—2)

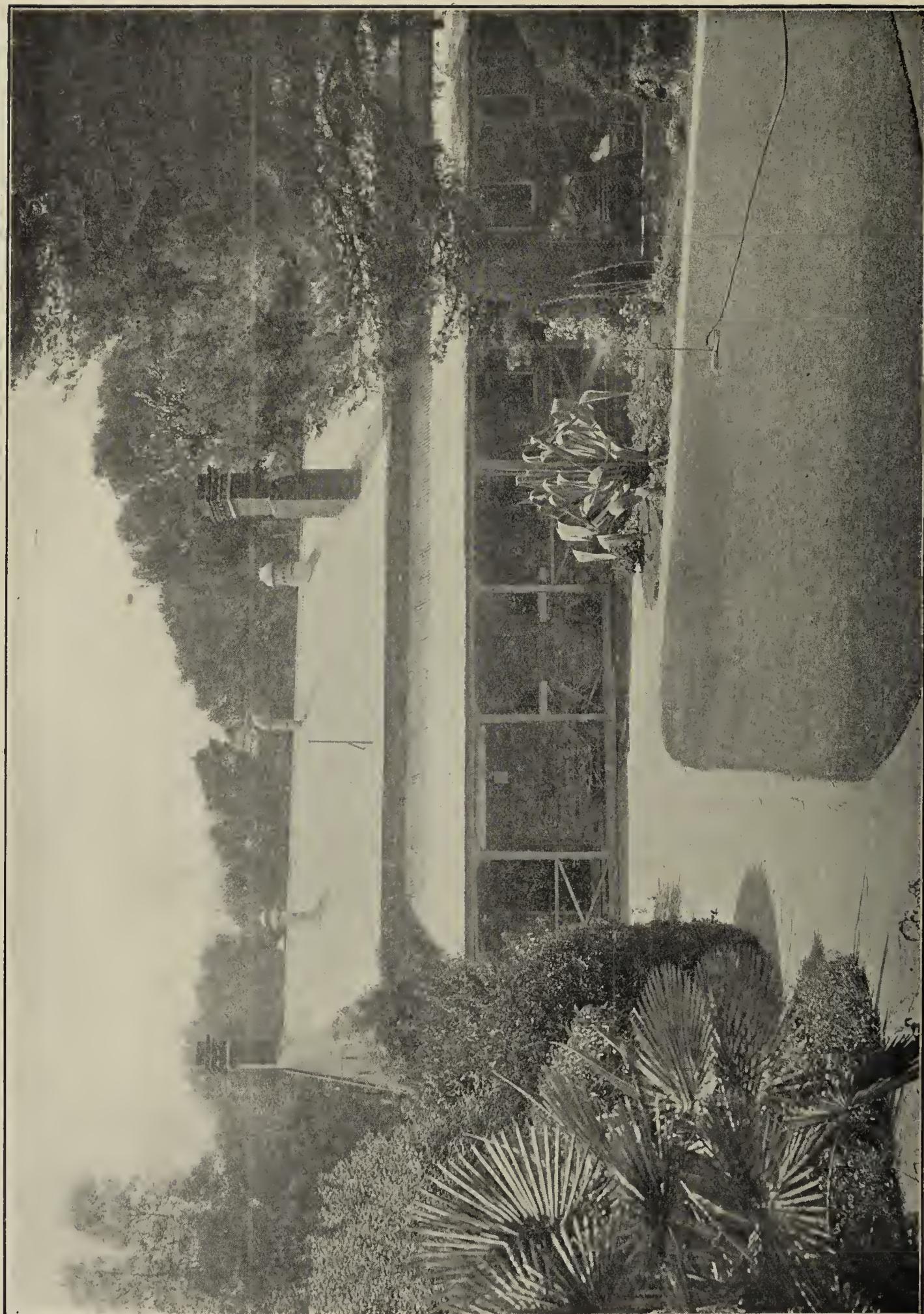




CONSUMPTIVES' HOME (Another Portion).

CONSUMPTIVES' HOME (Another Portion).

(p. 20—1\*)



## THE CONSUMPTIVES' HOME.

The home is situated on North Terrace ; the site is high, dry, screened from dust, and from all prevailing winds, and in addition is sunny and pleasant to the eye, with its green grass, flowering shrubs, and framework of large pine trees.

The inmates are thus placed amid nice surroundings, easily accessible to their friends, and taught such methods of individual and collective cleanliness as to be no longer in any way a menace to the health of the community.

Within the home are rooms set apart for library (with hundreds of books, periodicals, and magazines), smoking, billiards (full sized table), billatelle, and other games. A piano and organ are also provided, in fact everything is done to give the patients all the comforts of a good

home, together with the best medical and nursing skill procurable. There are 23 cubicles, three rooms for two patients each, one ward for eight patients, one ward for nine patients, one large bungalow for 12 patients, and four tents for one patient each—giving accommodation for 62 patients.

The buildings have verandahs on both sides, are thoroughly ventilated, the walls and ceilings are varnished and the floors covered with linoleum.

Provision is also made for the treatment of cancer cases, there being 14 single bedrooms devoted to this purpose.

The majority of cases pass through the Consultation room or are transferred from the wards of the General Hospital.

## Phthisis.

	M.	F.	Total.	Died.		Left.	Remaining in Hospital on Dec. 31st, 1920.	
				M.	F.		M.	F.
Remaining in Hospital on December 31st, 1920 .....	26	15	41	—	—	—	—	—
Admitted during year 1921 .....	59	33	92	—	—	—	—	—
Total treated for the year.....	85	48	133	34	32	23	35	9

## Cancer.

	M.	F.	Total.	Died.		Left.	Remaining in Hospital on Dec. 31st, 1921.	
				M.	F.		M.	F.
Remaining in Hospital on December 31st, 1920 .....	9	5	14	—	—	—	—	—
Admitted during year 1921 .....	39	20	59	—	—	—	—	—
Total treated for the year.....	48	25	73	37	18	4	8	6

## Cancer—Deaths Classified.

	M.	F.	Total.
Cancer of Head, Tongue, Jaw, &c. ....	20	1	21
" Stomach, &c. ....	15	3	18
" Female Genital Organs and Breast	—	14	14
" Rectum ....	1	—	1
" Other parts ....	1	—	1

	£	s.	d.
Total fees received for maintenance .....	688	9	6
Total expenditure of the Home.....	5,918	3	1
Average cost per bed occupied .....	100	6	2
Average daily resident, 59.			

## INFECTIOUS DISEASES BLOCK.

The number of new cases admitted to the block (909) constitutes a record, being 177 more than the previous year's admissions. The deaths totalled 28, a mortality rate of 3·1 per cent.

The increase was mainly shown in the diphtheria cases; 405 were admitted in 1921, 226 in 1920; there were 19 deaths, or a case mortality of 4·7 per cent.

There was a fall in number of scarlatina cases; 166 in 1921, 215 in 1920. With such a volume of work the need for better condition

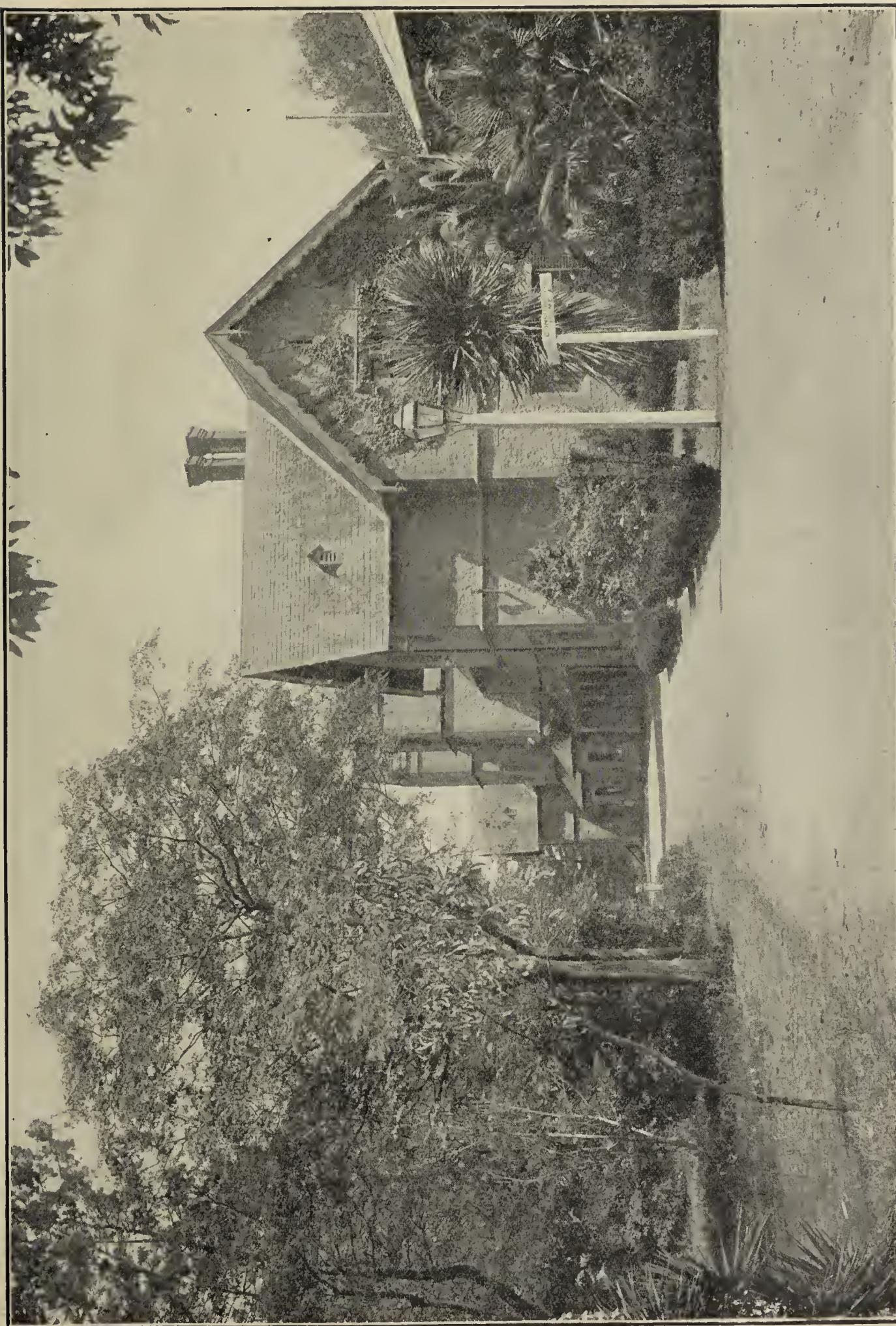
for dealing with infectious patients was more acutely felt than ever before, and it is gratifying to note that better accommodation is to be provided.

At present there are 87 cubicles, also two double rooms and two dormitories, taking each six beds, and two large sheds for 13 and 8 beds respectively, and now 2 new wards, 20 beds, although fitted up as an influenza block, has been utilised for the reception of scarlatina cases.

## INFECTIOUS DISEASES BLOCK REPORT, 1921.

Disease.	Admissions.			Cured.	Died.	
	M.	F.	Total.		M.	F.
	—	—	—		—	—
Diphtheria .....	170	235	405	386	4	15
" and scarlatina .....	13	17	30	29	—	1
" " mumps .....	2	—	2	2	—	—
" " measles .....	1	3	4	4	—	—
Scarlatina .....	59	107	166	166	—	—
Measles .....	42	31	73	72	—	1
" and pneumonia .....	1	2	3	3	—	—
" typhoid fever .....	1	—	1	1	—	—
" bronchitis .....	1	—	1	1	—	—
Tonsillitis (admitted as diphtheria) .....	52	84	136	136	—	—
Whooping cough .....	—	10	10	10	—	—
" and pneumonia .....	1	—	1	—	1	—
Mumps .....	5	—	5	5	—	—
Typhoid fever .....	2	—	2	2	—	—
Diarrhoea .....	1	—	1	1	—	—
Erysipelas .....	18	14	32	26	3	3
Chickenpox .....	8	12	20	20	—	—
Pneumonia .....	1	—	1	1	—	—
Bronchitis .....	1	1	2	2	—	—
Erythema .....	4	2	6	6	—	—
Heat rash .....	3	—	3	3	—	—
Respiratory catarrh .....	4	—	4	4	—	—
Septicaemia .....	—	1	1	1	—	—
	390	519	909	881	8	20
Remaining in Hospital December 31st, 1921 .....	15	18	33	—	—	—

	£	s.	d.
Total fees received for maintenance .....	3,732	4	0
Total expenditure .....	5,137	11	3
Average cost per bed .....	96	18	8
Average daily resident, i.e., per bed occupied .....	53		

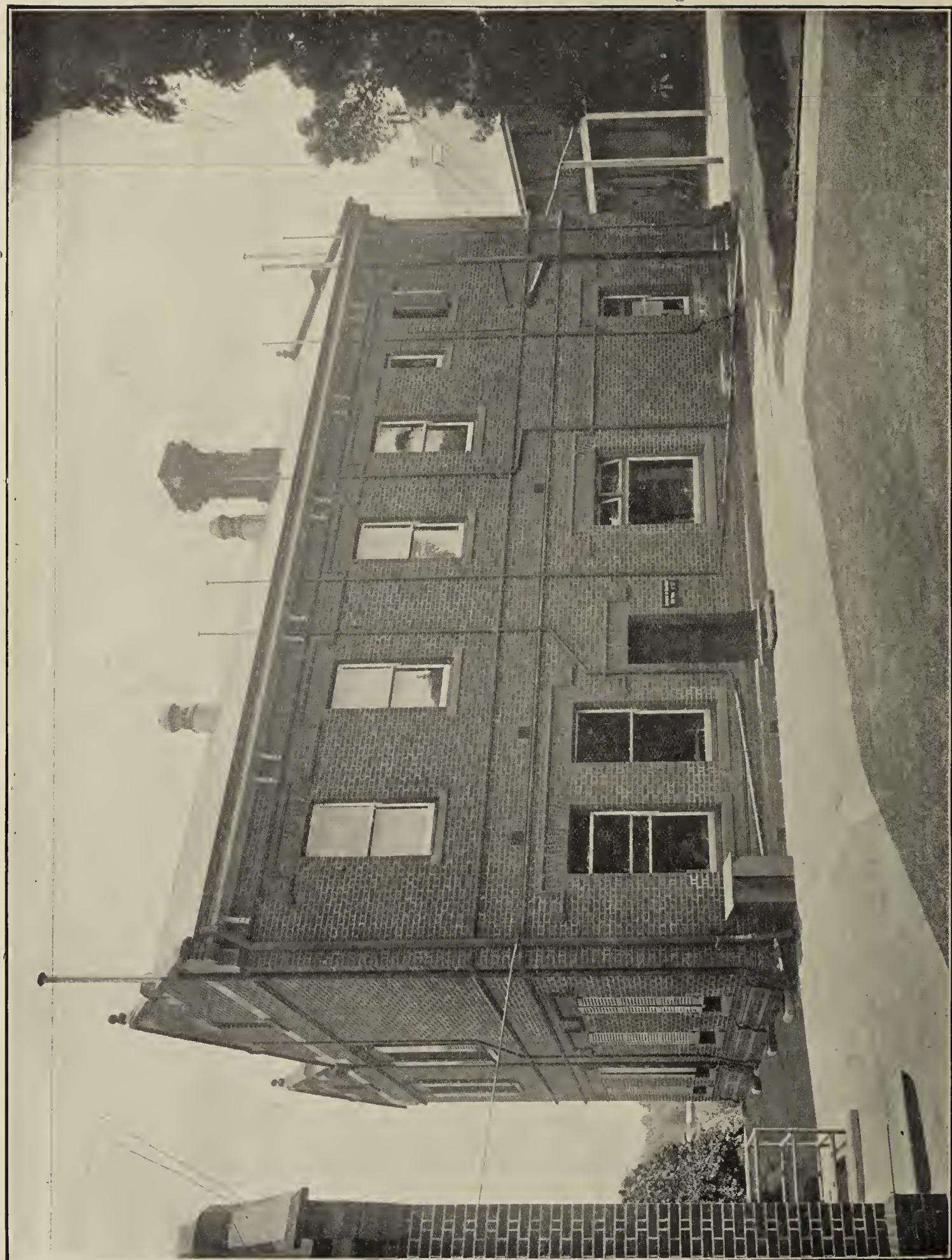


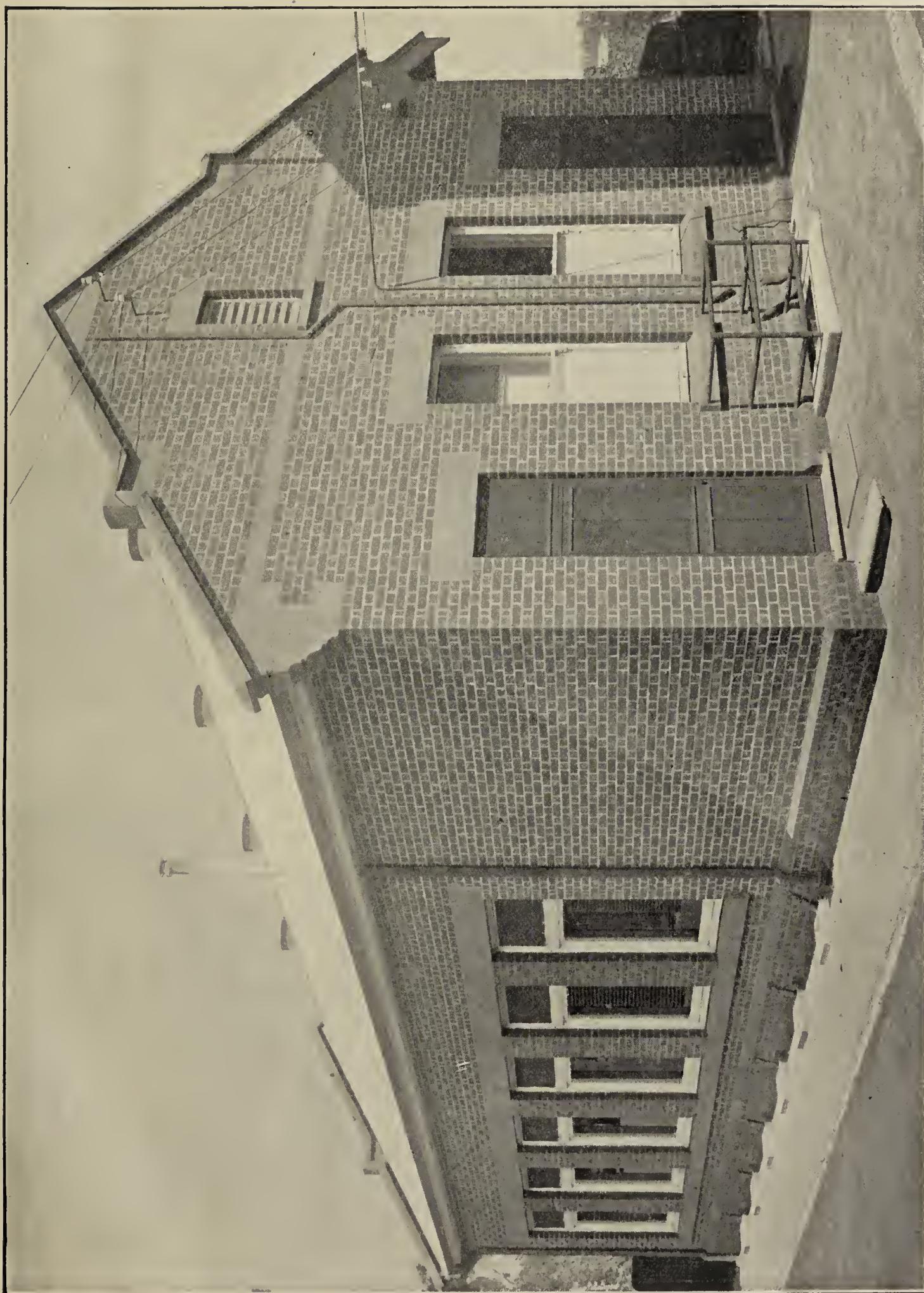
(p. 22—1)

INFECTIOUS DISEASES BLOCK (Front Portion).

LABORATORY (Portion of).

(P. 22—2)





HALL FOR LECTURES AND DEMONSTRATIONS (Laboratory).



**SOUTH AUSTRALIAN GOVERNMENT  
LABORATORY OF BACTERIOLOGY AND PATHOLOGY,  
ADELAIDE HOSPITAL.**

---

**STAFF.**

*Honorary Consulting Bacteriologist.*

THOS. BORTHWICK, M.B., Ch.M., EDIN.

*Director.*

J. B. CLELAND, M.D., Ch.M., SYDNEY.

*Deputy Director and Veterinary Pathologist.*

LIONEL B. BULL, D.V.Sc., MELB.

*Honorary Biochemist.*

T. BRAILSFORD ROBERTSON, Ph.D., D.Sc.

*Assistant Biochemist.*

A. R. SOUTHWOOD, M.D., ADEL.

*Bacteriologist in Charge of Vaccine Department.*

HELEN M. MAYO, M.B., B.S., ADEL.

*Laboratory Assistants.*

MISS F. E. DORMAN.	Senior	MISS E. CLELAND.
H. V. JUSTELIUS.	Assistants.	W. W. KILBORN.
		D. H. LOWEN.

*Clerk.*

MISS A. BRANNAN.

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The laboratory consists of a two-storied building, in which are situated the main working laboratory, inoculating rooms, director's laboratory, assistant's laboratory, museum, library, &c. Adjacent to the main building is a large students' laboratory and lecture hall, with a basement beneath, in which are ice chests and a photomicrographic room.

The accommodation for laboratory animals is very convenient, and the animals are healthy and well cared for.

A large veterinary experimental block, with loose boxes, pens, and an operating room, is situated about 100yds. away, near the north boundary of the hospital grounds. In this, horses, sheep, &c., can be kept under observation.

Appended is summary of work, 1921—

**EXAMINATIONS PERFORMED DURING YEAR 1921.**

*Adelaide Hospital—*

Clinical Pathological Examinations—

(a) Histopathological .....	313
(b) Blood counts .....	504
(c) Biochemical .....	82
(d) Miscellaneous .....	563
	<hr/> 1,462

Bacteriological Examinations—

(a) Throat and nasal swabs .....	3,866
(b) Sputa .....	459
(c) Urines .....	469
(d) Smears for gonococci .....	117
(e) Bloods for Widal reaction .....	146
(f) Miscellaneous .....	773
	<hr/> 5,830

EXAMINATIONS PERFORMED DURING YEAR 1921—*continued.**Private Work—*

Clinical Pathological Examinations—		
(a) Histopathological .....	373	
(b) Blood counts .....	115	
Bacteriological Examinations—		
(a) Throat and nasal swabs—		
(i.) Boards of Health and Public Departments .....	4,853	
(ii.) Others .....	1,139	
(b) Sputa .....	1,138	
(c) Smears for gonococci .....	306	
(d) Bloods for Widal reaction .....	97	
(e) Miscellaneous .....	1,585	
Stock Department—		9,606
Routine .....	32	
Special investigations .....	5	
Wassermann Reaction		37
Adelaide Hospital—Indoor .....	368	
" Out Patient's Department .....	86	
" Night Clinic .....	542	
Private .....	323	
Vaccines Prepared—		1,319
Adelaide Hospital .....	89	
Private .....	180	
Less examinations mentioned twice .....	269	
Grand total .....	17,931	

The Clinical Pathological Examinations performed for the Adelaide Hospital include:—(1) The histological diagnosis of pathological tissues, several of which were immediate examinations performed during operation (such examinations are done in order to help the surgeon in determining the extent and nature of the operation necessary); (2) The examination of urine to detect abnormal chemical and morphological elements; (3) The examination of faeces to detect the presence of abnormal elements; (4) The examination of cerebro-spinal fluid to detect cellular and chemical change (this examination is extremely useful in detecting syphilis of the central nervous system); (5) The examination of blood to detect the presence of the various anaemias and leukaemias; (6) The examination of material for the detection of spirochaeta pallida in the diagnosis of syphilis; (7) The examination of fluids from various cavities and cysts to determine their nature; (8) the examination of blood for the estimation of glucose, urea, proteins, &c. (These examinations are conducted by the Honorary Biochemist and the Assistant Biochemist.)

The Bacteriological Examinations performed for the Adelaide Hospital include:—(1) The examination of sputum for the detection of tubercle bacilli and other bacteria, and also for hydatid hooklets; (2) The examination of blood for the Widal reaction (this examination is important in assisting in the diagnosis of typhoid fever); (3) The examination of swabs taken from the throat and nose to detect the presence of diphtheria bacilli; (4) The examination of urine to detect the presence of tubercle bacilli, colon bacilli, and other bacteria; (5) The examination of inflammatory fluids for the detection of bacteria, e.g., pleuritic fluid for tubercle bacilli; (6) The examination of cerebro-spinal fluid to detect the presence of tubercle bacilli, meningococci, and other bacteria; (7) The cultural examination of blood to detect the presence of bacteria in the circulation; (8) The examination of faeces and urine for the detection of typhoid bacilli and other pathogenic bacteria; (9) The examination of pus for the detection of gonococci, actinomycetes, and other bacteria. Bacteria, isolated from the various fluids and materials, are often used in the preparation of autogenous vaccines.

The Wassermann Reaction was performed on Thursday in each week. This reaction is of great value in the diagnosis and treatment of syphilis. There is a general increase in the number of examinations made over those made during 1920.

The examinations performed and classified under the head *Private Work* include in the main such examinations as described under clinical pathological examinations and bacteriological examinations. Much work was done for the various Boards of Health. Included in the examinations are also:—(1) Examination of various foodstuffs for the detection of bacterial contamination; (2) Examination of drinking water to determine its suitability for drinking purposes. Included under this head is a special investigation carried out for the Adelaide Local Board of Health. The object of this investigation is to determine at regular intervals the bacterial content of the water as delivered from the Adelaide waterworks

main. This investigation is being continued. (3) The examination of disinfectants to determine their germicidal power. (4) The examination of rats in the search for any possible plague (*B. pestis*) infection.

The routine examinations for the *Stock Department* include (1) bacteriological examination of cow's milk for the detection of tubercle bacilli; (2) animal inoculation of cow's milk for the detection of *B. abortus*; (3) bacteriological examination of stomach contents of aborted calf; (4) morbid tissues for histopathological examination, &c.

The investigation into the cause of "forage poisoning" was continued and encouraging results have been obtained. Cultures made from suspected fodder have shown the presence of a toxin-producing anaerobe. The toxin resembles that of *B. botulinus* in its capacity of being absorbed through the mucous membrane of the digestive canal and in the nature of the symptoms produced.

Investigations were also made into the nature of several diseases of sheep.

The *Vaccine Department*, as well as preparing 269 separate vaccines, also administered inoculations of vaccine to hospital patients. During the year 91 hospital patients were under treatment. The majority of these patients visited the laboratory twice a week during their course of treatment when they received their injections. In all, 974 doses of vaccine were administered; also 503 doses of tuberculin were given to 20 patients. Vaccines were prepared for 161 patients under the care of private practitioners, and 1,839 doses (including 32 doses of tuberculin) were supplied for these patients.

The examinations made by the *Biochemical Department* have more than doubled in numbers. There will be a much greater increase in this work as its value is more fully appreciated.

During the year facilities have been given to the laboratory work involved in the investigation being carried out by the Research Fellow, Dr. Beare, into the nature and cause of infantile diarrhoea, for the committee controlling the gastro-enteritis investigation fund.

Accommodation has been found for Dr. Beare and his assistant who have had the use of apparatus and material supplied by this department. Important results, which have helped considerably to advance our knowledge of the bacteriology of these diseases, have been obtained.

*Summary.*—The figures show approximately 6,000 more examinations made than during 1920. This increase is largely due to the increased number of throat swab examinations. In all departments, however, the numbers are increased, showing that the value of the work is being more generally appreciated.

Much inconvenience is being caused by the want of space for working purposes and further accommodation is urgently required.

Fees received .....	£2,301 9s. 5d.
Expenditure .....	£2,970 12s. 4d.

(*Supplement to the Annual Report of the Adelaide Hospital for the Year 1921.*)

# THE MEDICAL AND SCIENTIFIC ARCHIVES OF THE ADELAIDE HOSPITAL.

## *Editorial Committee:*

J. BURTON CLELAND, Honorary Pathologist.  
C. T. C. DE CRESPIGNY, Honorary Physician.

ARTHUR M. CUDMORE, Honorary Surgeon.

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## THE MEDICAL AND SCIENTIFIC ARCHIVES OF THE ADELAIDE HOSPITAL.

It has long been realised that a mass of valuable information, from a professional and scientific aspect, was being dissipated and to a great extent lost in the Adelaide Hospital and its associated institutions through there being no means available for collecting, systematising, and permanently recording it. This information, the result of the collection of laborious data, of experience, of judgment, confirmed or otherwise by the eventual result, if available in the future by being properly recorded would undoubtedly help to clear up problems in medical science, to assess the values of different methods of treatment, to focus attention on hitherto undifferentiated entities, and to bring about in individual cases of sickness an earlier appreciation of the nature of the disease and a more efficient means of controlling or curing it. The failure thus to record and note all that with advantage should be rerecorded and noted in the experience of the chief hospital of a large State supported by public funds was unquestionably an instance of waste and of disregard of opportunity that should not be allowed to continue. It is true that in the medical press the most important material may find an avenue for publication, but such avenues are limited in capacity, and have perforce to skim the cream from the work of the whole medical world of Australia and the rest of the British Empire, leaving the skimmed milk of knowledge to be poured down the gutter and wasted instead of—may we use the homely simile without unduly stressing it—fattening pigs theron. The annual issue of these archives is for the purpose of saving, as far as this hospital is concerned, some of this waste, and of making, we trust, useful additions to knowledge by such conservation.

With the above object in view a proposal for the publication of the archives was submitted to a meeting of the honorary staff. This proposal was unanimously endorsed by the members. The Board of Management appreciated the importance of the scheme and supported and recommended its adoption, in which, with foreseeing wisdom, the Government concurred. A committee was then appointed to arrange and carry out details, dealing with the work of the Adelaide Hospital as well as that of the associated bodies, the South Australian Laboratory of Bacteriology and Pathology and the Dental Hospital.

The committee have decided that these records shall include full information of cases of unusual interest or rarity, the results of series of cases under particular forms of treatment, the summation of the clinical and pathological details of various selected diseases as representing the experience in this State, and the record by short notes of interesting or useful observations, clinical, pathological, bacteriological, or epidemiological by the officers of these respective

institutions. In this, the first issue, a commencement\* is made. Owing to the late period of the year in which the committee assumed its duties the present record must fall far short of the Utopian excellence aimed at.

### I.—HYDATID DISEASE.

#### PART I.—SURGICAL CASES.

(Compiled by C. Turner, Medical Superintendent.)

During the year 1921 there have been a number of cases of hydatid disease treated in hospital. Where possible, in addition to radiographic and clinical findings, the complement fixation reaction has been carried out by Dr. N. H. Fairley, of the Eliza Hall Institute, Melbourne. The results have shown a positive reaction in practically all cases of hydatid disease, and the negative results have been of considerable aid in arriving at a diagnosis in suspected but doubtful cases. In the following resumé of the clinical and other records of six cases in which this test was applied, five were proven to be hydatid at operation, and in each case a positive result was obtained. In the remaining case (case 1), which was shown at autopsy to be one of malignant disease of the colon, the reaction was negative. The seventh case recorded in this section is of particular interest in connection with the jaundice and degenerated daughter cysts in the gall-bladder.

#### Case 1.

##### *Carcinoma of the Sigmoid Flexure.*

(Under the care of Dr. Johnson.)

L.W., female, *aet.* 53 years, admitted on August 15th, 1921; died on August 20th, 1921. This patient had been ill for seven weeks before admission. Her illness commenced with swelling of the abdomen and vomiting, with persistent constipation. There was a vague history of having passed a hydatidiform mole 10 years previously; otherwise she had had no previous illnesses. The abdomen was much enlarged. There were signs of free fluid in the abdominal cavity. The liver was enlarged downwards to the umbilicus. The central swelling was dull on percussion, and gave the impression of a large cystic mass. She died rather suddenly four days after admission. The autopsy showed a scirrhus carcinoma of the sigmoid flexure with extensive malignant infiltration of the mesentery, omentum and parietal peritoneum. The whole of the abdominal organs were matted together by old, dense adhesions. The parietal peritoneum was thick and tough, with the bowel intimately adherent to it. There were several pints of free fluid in the abdominal cavity. The blood revealed no eosinophilia, and the Wassermann reaction and the hydatid reaction were both negative.

## Case 2.

*Hydatid of the Liver.*

(Under the care of Dr. Cudmore.)

J.N., male, *aet.* 35 years. Admitted on 4th April, 1921; operation on April 22nd, 1921; discharged on May 27th, 1921. The patient complained of a lump in the right side of the abdomen, which he had first noticed seven months previously. There was an aching pain in the side. He had had no vomiting and no jaundice. He had lost 10lbs. in weight in six weeks. He had been operated on for hydatid disease of the liver nine years previously. He had always lived in the north of the State. When examined, he had a normal pulse, respiration, and temperature. The heart and lungs were normal. There were scars of old operations on both sides of the chest laterally. There was a fullness in the right epigastrium. This fullness was dull on percussion, and the dullness was continuous with the liver dullness, which extended up to the sixth rib in the nipple line and projected downwards apparently from the liver for 3ins., but did not cross the middle line. Its lower level was that of the umbilicus. It was tender on palpation. No thrill was detected. The skin showed marked dermatographia. The urine contained no albumin or sugar. A skiagraph taken on April 19th did not reveal a localised liver opacity, and the liver was not enlarged upwards. The hydatid complement fixation reaction was positive. The reaction in this case was not as strong as has been generally found in multiple infections. He was operated on on May 22nd, 1921, under open ether through an oblique incision through the old scar. A large mass extending into the liver was felt. This was punctured and a little fluid evacuated. The tumor was then incised, a large number of daughter cysts evacuated, and the cavity drained. On April 24th there was very little drainage, and the wound had healed six days later. The course, after operation, was afebrile, and he was discharged well on May 27th, 1921.

## Case 3.

*Hydatids of the Liver.*

(Under the care of Dr. Newland.)

J. L., male, *aet.* 13 years, residing at Wallaroo. Admitted on November 17th, 1920; operated on November 22nd, 1920, and on January 6th, 1921; died on January 8th, 1921. The patient stated that he had taken a "chill" after swimming, one week before admission. He had gone to school next day but had felt worse on the following day and had had to go to bed. On the day prior to admission he had had pains in his back and right side, especially when he breathed deeply. He had had some cough with little sputum. He had been operated on four times previously for hydatids but had been well for the last two years. There was no hydatid disease in other members of his family. When admitted, he was a pale, sallow child, and was very ill. The tongue had a white fur on the dorsum, and the lips showed some herpetic eruption. The pulse was rapid (130) with a fair volume and tension. The respirations were 32 per minute; temperature 101 degrees. The heart was normal in respect to size and position. The chest was prominent and almost bulging over the right lateral aspect, and the lung on the right side showed signs of compression of the lowest lobe. The liver was enlarged downwards for 2ins. below the costal margin, and its dullness extended across the epigastrium to the left costal margin, and upwards to the third rib in the right anterior axillary line. A radiograph showed an opacity in the vicinity of the diaphragm on the right side, probably in the liver. The hydatid complement fixation reaction on November 29th was P. ++.

An operation was performed, under ether, on November 22nd, 1920, by a right epigastric vertical incision. The cyst in the liver was punctured and copious hydatid fluid evacuated. Numerous daughter cysts, mostly in a state of degeneration, were removed. The general condition of the patient after operation went from bad to worse. There was increasing pallor and muddiness of the complexion. There was a hectic fever, the temperature rising to 100 degrees to 101 degrees F. in the evening. On December 9th the right chest was explored and some blood-stained fluid (5c.c.) removed. Examination of the fluid was negative. The patient began to have rigors on December 10th, and a series of subcutaneous injections of antistreptococcal serum (10c.c.) were given. The wound ceased draining gradually, and on January 3rd, 1921, the tube was removed. On this date the feet were oedematous and the heart was dilated slightly. The temperature now reached 99.8 degrees at night.

A blood count on January 5th showed 6,400 leucocytes, and 2,700,000 erythrocytes. A skiagraph on the same day revealed an increase of the liver opacity, the right dome of the diaphragm being higher than normal. On January 6th he was again explored owing to continued pyrexia and wasting. A trocar inserted between the fifth and sixth ribs on the right side laterally withdrew pus. The pus was located in the liver after incision and closure of the pleural sac. It came from a large suppurating hydatid cyst of the liver. Much foul pus and degenerated daughter cysts were evacuated. His condition next day was very low. There was marked pallor, wasting, and a failing heart. Blood transfusion was done, 400c.c. of citrated blood (obtained from his brother) being injected into his circulation. Death occurred on January 8th, 1921.

At autopsy the liver weighed 72ozs. and revealed the cavity of the cyst found at the first operation and of that opened on January 6th, 1921. Two more cysts were present, one causing adhesion of the stomach to the surface of the liver, and the other binding the liver to the diaphragm on the right side. The spleen showed several infarctions. The heart was dilated and hypertrophied. The left kidney only was present (the right had been removed at a previous operation). This remaining kidney showed no gross changes.

Pathological findings during illness:—December 29th, 1920, the sputum showed no tubercle bacilli or evidence of hydatids. Pus from the second hydatid cavity showed on cultivation *Staph. albus* and streptococci.

## Case 4.

*Hydatid Cyst behind the Kidney.*

(Under the care of Dr. Newland.)

G. M., male, *aet.* 29 years, a billiard-marker, residing at Evandale, South Australia. Admitted on January 18th, 1921; operated on on January 27th, 1921; discharged on February 23rd, 1921. He complained of having had pain in the right loin during the previous nine months. He had had influenza at this time, and soon afterwards he noticed the pain in the right loin and his right foot began to swell. The pain was aching in character and kept him awake at night. Lately the pain had not been so severe. He had had no rigors or sweats. Micturition was normal. The bowels were regular. His appetite was poor, but he had not vomited. He had lost 9lbs. to 10lbs. during the illness and was becoming weaker. He had had no previous illnesses, but had always been delicate and had had indigestion for several years. Examination revealed a pale, thin man, moderately wasted. His temperature was normal and chest clear. The muscles of the abdomen were on guard in the right upper quadrant and there was tenderness on palpating the kidney region. A large fluctuant mass could be felt in the right loin. Urine contained no sugar or albumin, and was clear. The hydatid complement fixation reaction was P. ++.

He was operated on on January 27th, 1921, under ether anaesthesia. An oblique incision was made into the right loin. As soon as the muscles were cut through a considerable quantity of yellowish-green pus was evacuated from a large cavity placed behind the kidney, a pint being removed. Two hydatid daughter cysts were then removed and a drainage tube inserted. This patient made an uninterrupted recovery and the course was afebrile. On May 5th, 1921, a further complement fixation reaction was carried out. The report stated that "the reaction may be regarded as negative, although some haemolysis is still present."

## Case 5.

*Hydatid Cyst in a Laparotomy Scar.*

(Under the care of Dr. Cudmore.)

C.S., female, *aet.* 36 years, residing at Naracoorte, South Australia. Admitted on April 7th, 1921; discharged April 14th, 1921. This patient came in complaining of a soreness under the scar of an old laparotomy wound. She had been operated on in June, 1920, for hydatid disease of the liver. The wound had healed after the operation, and she had had no further trouble until one week ago, when the scar became tender and painful. When examined, her temperature was normal and she was comfortable in bed. In the right upper quadrant of the abdomen there was a cicatrix, the left extremity of which was inflamed and tender, and there was a small bleb on the inflamed portion. The tissue about the inflamed area was thickened. The liver extended 1in. below the costal margin. An incision was made into the swelling, and a small hydatid cyst found to exist in the scar. The wound healed rapidly. Blood

was collected on April 12th and the hydatid complement fixation reaction was P. + + +. It is not known whether this positive reaction was due to the small hydatid in the cicatrix, as it is possible she may have hydatid cysts elsewhere as well.

#### Case 6.

##### *Hydatid Disease of the Lung.*

(Under the care of Dr. Cudmore).

H.H., male, *æt.* 50 years, residing at Magill, South Australia laborer. Admitted on August 16th, 1921; discharged on October 28th, 1921; no operation. The patient had suffered from hydatid disease for many years. He was operated on first in 1914 and again in 1915, 1916, 1918, and three times in 1919. For the last 14 days he had had pain and a feeling of discomfort in the epigastrium. He also had had a cough, which was worse at night, and profuse expectoration. He had been "bringing up skins" for a week previously. He had had an ulcer on the left leg for seven years. His appetite was good and his bowels regular. He had not lost weight during the last six months. He had had no other illnesses. He had lived at Third Creek for some time, and thinks he acquired his infection there. Other Third Creek residents have had hydatids. The patient appeared a healthy-looking man. His temperature was normal. The percussion note of the lungs was impaired on the right side anteriorly from the nipple downwards. Vocal resonance and tactile fremitus were reduced over the dull area. The breath sounds were transmitted, but distant. Posteriorly there was dullness at the right base with an absence of breath sounds at the extreme base. Vocal resonance and fremitus were absent. The dullness had a convexity upwards and extended to the angle of the scapula. There were several eicitatries in the epigastric region, the flank, and on both sides of the chest, and a varicose ulcer over the middle of the left tibia. The blood on August 29th, 1921, showed an eosinophilia of 16 %, and the hydatid complement fixation reaetion was positive. The patient continued coughing up daughter cysts, and was sent home on August 28th, 1921.

#### Case 7.

##### *Hydatid Daughter Cysts in the Gall-bladder, with Jaundice.*

(Under the care of Drs. de Crespigny and Cudmore.)

A.W., male, *æt.* 36, was admitted first on May 20th, 1921, complaining of diarrhoea, pain in the lower abdomen, and jaundice. A "chill" followed by an increase of jaundice had occurred 10 days after the onset. The liver dullness was increased upwards to the fifth intercostal space in the mammillary line. He was discharged on May 31st. The jaundice had disappeared, and he felt well. He was readmitted in his second attack on September 1st. Four days previously he had had "sudden pains in the stomach and back while having a meal." The pain was intense and nauseating. The pain had now lessened but recurred at night, and was felt chiefly in the right side of the back. The temperature rose to 101.4°. He was jaundiced. The abdomen was rigid and the liver could not be felt, but percussion revealed an enlargement of the liver, dullness from the level of the fourth rib anteriorly, and the angle of the scapula posteriorly on the right side to a point 2.5 cm. above the umbilicus. X-rays confirmed the above finding, showing a general hepatic enlargement.

On September 6th the hydatid complement fixation test was negative and the blood showed 85 per cent. of haemoglobin, 5,624,000 red cells, 6,300 white cells, and 2 per cent. of eosinophiles. The Wassermann reaction was negative on September 8th.

On September 8th the liver was normal in size. The jaundice had disappeared. He was discharged relieved on September 30th.

He was readmitted for his third attack on December 12th, complaining of pain in the right side. Clinical examination showed jaundice and hepatic enlargement. Laparotomy was performed by Dr. Cudmore on December 23rd. Palpation of the liver showed that its surface was beset with numerous rounded projections the size of large marbles, and the organ was generally enlarged. The gall bladder, on being opened, was found to contain bile and two small dark olive-green collapsed hydatid cysts like grape skins. On microscopic examination of these the lamination of the ectocyst could be easily distinguished. The cysts were deeply stained and impregnated with crystals. No seolices or hooklets were found. The patient's convalescence was febrile, but in a few weeks he was discharged, having been relieved of his symptoms.

*Comments.*—The points of interest are—(a) Three attacks characterised by pain, jaundice, and considerable hepatic enlargement, all of which subsided in the intervals between attacks. (b) The presence of collapsed daughter cysts in the gall-bladder. (c) The widespread infestation of the liver with small cysts. Presumably the poroxysms of pain, jaundice, and hepatic enlargement were due to blockage of the hepatic ducts by small cysts, two of which found their way up the cystic duct to the gall-bladder.

The serum reaction was negative, and the eosinophiles amounted to only 2 per cent. on September 6th.

#### PART II.—CASES OF HYDATID DISEASE MET WITH POST-MORTEM

By J. B. Cleland and D. L. Barlow.

During the two years 1920 and 1921, six instances of hydatid infestation have been met with in the *post-mortem* room out of 350 *post-mortem* examinations. Only one case was detected out of 149 such examinations in 1920, but five were seen in 201 in 1921. In several of these cases the cysts were very old, being almost completely calcified and not responsible for the fatal issue, or recently at any rate causing symptoms. Hydatid infestation of the inhabitants of South Australia is doubtless, therefore, considerably heavier than operation and clinical hospital statistics might suggest, and in quite a number of instances spontaneous cure occurs. The rarity of hydatid disease in man in most other parts of the world, and the expectation that in the near future the disease will become less prevalent in Australia, prompts the recording of all cases at present encountered.

#### Case 1.

##### *Hugh Calcifying Hydatid of the Liver, with Jaundice.*

(Under the care of Dr. Cudmore).

*Post mortem* 51/20.—H.A., male, *æt.* 58. Admitted on May 9th, 1920: died on May 13th. The patient complained of a swelling in the right side, of pain, jaundice, and diarrhoea. He gave a history that 30 years ago he had coughed up cysts. A diagnosis was made of an hydatid cyst pressing on the bile ducts and causing the jaundice. Laparotomy was performed, and an hydatid cyst was found in the liver from which countless daughter cysts were evacuated. At the autopsy grumous blood-stained fluid was found between the muscles near the laparotomy wound, and there was general peritonitis. The heart was displaced upwards and to the left by the hypertrophied left lobe of the liver, whilst the right lobe had displaced the base of the right lung upwards and led to adhesions at its base. The right lobe of the liver was nearly entirely replaced by a very large irregular old hydatid cavity which had tunnelled into the substance of the lobe so as to leave merely a shell of fibrotic liver substance, sometimes quite thin, in places about an inch thick; the wall of the cyst was firm and in parts calcified, and its internal surface was ragged. A few small undegenerated daughter cysts lay beneath this capsule; the cyst had tunnelled under beneath the gall-bladder, considerable fibrosis surrounding the upper surface of the organ and the cystic duct, extending to the common duct. The left lobe was greatly hypertrophied, displacing the heart and forming the whole of the organ visible on first opening the abdominal cavity. This lobe showed some diffuse fibrosis. The wall of the gall-bladder was thickened, and its cavity contained some soft whitish degenerated material. The right kidney was adherent by its upper pole through the suprarenal capsule to the underside of the right lobe of the liver.

*Comments.*—Hypertrophy of the unaffected left lobe of the liver was marked. The history of the case suggests the possibility that the hydatid infection on admission may have originated 30 years previously.

#### Case 2.

##### *Very Large Hydatid Cysts of the Liver and Peritoneal Cavity.*

(Under the care of Dr. Johnson.)

*Post mortem* 8/21.—R.T.F., male, *æt.* 72. Admitted January 26th, 1921, and died on January 27th. There was a history of hydatid disease of the liver of 17 years' duration. He had refused operation. The abdomen had gradually enlarged accompanied by loss of strength and increasing dyspnoea. He was admitted in a condition of profound weakness, and was partially unconscious. The abdomen was very much enlarged and tense, the liver enormously enlarged, and the heart pushed over to the left. At the autopsy, the right lung was found to be compressed by the ascent of the liver to the

level of the third rib. Its base was congested and oedematous. The left lung was also compressed and oedematous. The left ventricle was somewhat hypertrophied. The enormously enlarged liver weighed 5½ lbs. In the right lobe was a large suppurating hydatid cyst containing a brownish pus and numerous daughter cysts, and bordered by a thick fibrous capsule. This portion of the liver was adherent to the diaphragm, which had been pushed up to the level of the third rib. Lower down in the right lobe was another hydatid cyst projecting on to the anterior surface enclosed in a thick capsule, and containing numerous daughter cysts. The left lobe of the liver was greatly hypertrophied; its substance was tougher than normal and the color pale. There were three other abdominal cysts—one in the omentum near the hepatic flexure, another also in the omentum beneath the transverse colon, and the third in close contact with the upper surface of the spleen; each was about the size of a large orange and contained large numbers of compressed daughter cysts. The kidneys showed slight interstitial changes. The spleen was somewhat enlarged and fairly firm.

*Comments.*—The points of special interest are:—(1) The duration of the condition, 17 years, with enormous cysts resulting; (2) suppuration in one cyst; (3) the presence of five cysts, probably representing the successful implantation of five separate embryos, there being nothing to suggest that any of the cysts were due to the escape of daughter cysts from one of the others; and (4) the compensatory hypertrophy of the uninvolved left lobe of the liver.

#### Case 3.

*Obsolete Calcified Hydatid of the Liver.*  
(Under the care of Dr. de Crespigny).

*Post mortem* 28/21.—Mrs. G. S., *aet.* 74. Admitted on February 25th, 1921. The patient died on March 8th as a result of chronic nephritis and cardiac failure. At the autopsy the upper part of the right lobe of the liver was found to contain a hard whitish irregular mass, which appeared as if "let into" the liver substance, which proved to be a calcified hydatid.

#### Case 4.

*Small Obsolescent Hydatid of the Liver.*  
(Under the care of Dr. Cudmore).

*Post mortem* 90/21.—P.A., male, *aet.* 38. Admitted on June 15th, 1921. The patient died the same day from fracture of the skull and laceration of the brain. In the left lobe of the liver was found a small obsolescent hydatid cyst.

#### Case 5.

*Large Hydatid Cyst of the Liver.*  
(Under the care of Dr. Ray).

*Post mortem* 147/21.—G.S., male, *aet.* 69. Admitted on August 8th, 1921; died on August 30th. The patient had been able to work until four days before admission, though he had had an abdominal swelling previously. He now complained of cough, shortness of breath, and swelling of the feet. The autopsy showed, as the immediate cause of death, lobar pneumonia affecting the upper lobe and the upper part of the lower lobe of the right lung and the central portion of the lower lobe of the left lung. On opening the abdominal cavity a whitish fluctuant swelling was found projecting upwards from the right lobe of the liver and downwards as far as the iliac fossa. The right kidney was pushed forward by, and the ascending colon stretched on the inner side of, the swelling. The swelling was found to be due to the replacement of practically the whole of the right lobe of the liver by an hydatid cyst containing numerous daughter cysts. The left lobe of the liver was greatly hypertrophied, and its structure seemed somewhat clouded.

*Comments.*—The large size of the cyst and the hypertrophy of the uninvolved left lobe of the liver may be noted.

#### Case 6.

*Calcifying Hydatid of the Liver with Papillomatous Cyst Wall.*  
(Under the care of Dr. de Crespigny).

*Post mortem* 171/21.—M.P., female, *aet.* 87; was admitted on October 12th, 1921, and died from senility, bronchitis, and cardiac failure on October 25th. The autopsy revealed in the outer part of the right lobe of the liver an hydatid cyst about 2½ in. in diameter

with a thickened calcifying capsule, and containing numerous daughter cysts. This capsule was adherent on its under surface to the right kidney, the suprarenal capsule being wedged in the angle between the liver and the kidney. The ectocyst showed in places a low papillomatous appearance.

## II.—CASES OF TUBERCULAR AND ACID-FAST INFECTIONS OF INTEREST.

The following cases are of interest as illustrating the pathological conditions met with in association with infections by acid-fast bacilli. Two of them are tubercular in nature, whilst the third showed the formation of a large abscess with secondary purulent pyæmic foci, eventually fatal, in which the pus contained enormous numbers of an unknown acid-fast bacillus which was not the tubercle or leprosy bacillus. The tubercular cases were unusual, inasmuch as one died from a clinically typical aplastic anaemia, in which tuberculosis was unsuspected, and the other died from the asthenia following on an exceedingly extensive and intractable dermatitis. In the first of these it is considered that the aplastic anaemia was brought to the fore—from *in posse* to *in esse*—by a progressing abdominal tuberculosis. In the second the extent of the tubercular lesions and the numbers of the bacilli suggest that the dermatitis, from which apparently the patient more directly died, may have represented a special cutaneous sensibility due to tuberculinization.

#### Case 1.

*Aplastic Anaemia with Advanced Masked Abdominal Tuberculosis.*

By C. Turner and J. B. Cleland.  
(Under the care of Dr. Cowan).

M.S., female, *aet.* 29 years, had been born in England. She was removed off the s.s. *Barradine*, which arrived on November 5th, 1921, from England, being admitted on November 8th, 1921. Four days after leaving England her left big toe swelled, became red and painful. Then her ankles began to swell, and she developed large patches like bruises on her shins. (Dr. de Crespigny has suggested that these may have been due to erythema nodosum.) These were bluish at the beginning, and were tender, and her limbs ached. She had been somewhat anaemic before leaving England. Her previous health had been otherwise good. By the time she reached Durban she had improved, and went ashore. After leaving Durban she got a severe cold, her head was "stuffed up," and she got a sore on her lip. This sore commenced as several yellow spots, which finally formed a large yellow scab. The scab came off and left her lip swollen and painful. She had to take to her bed, and had been in bed since. She now complained of weakness and a dull aching pain in the right side of the abdomen. The bowels were constipated. There were 1,300 passengers on the ship, and there was much illness. Some had septic sores, others had diarrhoea, and the hospital was constantly full. She had had a severe attack of diarrhoea, lasting a day only, just before arriving in Australia.

*On examination.*—The patient is a very emaciated young woman. There is marked pallor of the skin and conjunctivæ. The pupils react to light and accommodation. The tongue is somewhat dry, with white dorsal fur. There is a sore on the lower lip on the left side near the angle of the mouth, with a fairly definite raised margin; its surface is granular and bleeds easily; the lip is, to some degree, infiltrated but not very hard. There is no enlargement of the cervical glands. The chest is normal except for a few inspiratory crepitations at both bases posteriorly. The spleen is not palpable. The liver is not enlarged downwards. There is deep tenderness on palpating the right loin and the right iliac region. This region is full, but no definite mass can be felt. The legs show a few greenish-grey circular spots over the tibiae. The reflexes are normal.

The following day a blood examination gave the following result:—Leucocytes 2,300 per c.mm. There was a relative increase of lymphocytes. Serum expressed from the sore on lip showed no spirochaetes. The Widal reaction gave slight clumping with *B. typhosus*, and a negative reaction with *B. paratyphosus* A and B. The constipated stools contained a good deal of mucus but no blood. No typhoid or dysentery organisms were recovered from the faeces.

November 14th.—Red blood count, 1,168,000; haemoglobin, 24 per cent.; color index, 0.9.

November 16th.—Red cells, 940,000 ; haemoglobin, 16 per cent. ; color index, 0.8. The red cells showed some anisocytosis, but no other abnormality. The white cells were too few to allow of a differential count. The majority of the cells present were lymphocytes. The blood picture agreed with that of an aplastic anaemia. Her general condition was worse. There was profound weakness. The patient was unable to move without assistance. She complained of a dull ache in the right loin. The blood gave a negative Wassermann reaction.

November 20th.—Given 600 c.c. of citrated whole blood from a universal donor at 11 a.m. At noon she had a slight shiver and her temperature rose to 100 F. At 4 p.m. the temperature was normal, and she felt much better. Her color was much improved. A blood count next day gave the following result :—Erythrocytes, 2,000,000 ; haemoglobin, 35 per cent. ; color index, 0.8. After transfusion her condition had slightly improved. She still had pain in the right side, but the appetite was improved, and she took nourishment freely. The stools were examined for ova of *Ankylostoma duodenale*, with a negative result.

November 22nd.—The color was much improved. Lips, fingers, and ears were pink. She felt much better. There was still pain in the right loin.

November 24th.—Urobilin was not detected in the urine by the spectroscopic method. This examination was carried out for the purpose of detecting any abnormal haemolysis.

Two days later (November 26th) she was very pale again. The blood showed 1,096,000 erythrocytes ; haemoglobin, 16 per cent. ; color index, 0.7. At this time she began to get drowsy, and later became unconscious and died on November 27th.

*Post-mortem Examination No. 186/21.*—The body was extremely blanched. There was a sore, with a scab on it, on the lower lip. Petechiae were noticed on the pleural, pericardial, and peritoneal surfaces. Numerous miliary tubercles were found scattered thickly over the caecal region and adjacent peritoneal surfaces, occurring especially near the mesenteric attachment of the small intestine and in the ileocaecal angle. In the latter situation was a large gland about 5 cm. in diameter which, on section, appeared fleshy and suggested a neoplasm, but showed in one place a small calcareous deposit. A number of other less enlarged glands were matted together into a mass. Collections of small dilated vessels were seen surrounding many of the tubercles. On the inner aspect of the caecum near the ilico-caecal junction was a plaque-like thickening of the mucosa without definite ulceration. The liver showed widespread scattered miliary tubercles under the surface and in the substance ; the glands in the portal fissure were rather enlarged, but showed no signs of caseation or tubercular infection. The spleen was rather large, weighed 7½ ozs., was somewhat soft, and showed scattered whitish foci (miliary tubercles). The uterus was ante-flexed ; the uterine adnexa showed no signs of tuberculosis. The kidneys were very pale. In the left lung were occasional minute miliary tubercles. The bronchial glands were slightly pigmented, but showed no evidence of tuberculosis. There was no reaction in the bone marrow of the femur. The ribs were remarkably flat, with very little marrow cavity present. There were no other lesions of note detected.

*Histological Examination.*—The liver shows numerous miliary foci. The smallest of these occur as collections of lymphoid cells, apparently anywhere in the lobule or in the portal area. Larger foci show a more or less extensive necrotic centre, with degenerated cells in a fine degenerated reticulum, surrounded by a zone of lymphoid and sonic connective tissue cells. In the largest of these is a central cavity, the surrounding necrotic tissue being deeply bile-stained. The surface of the liver shows a similar infiltration with lymphocytes, connective tissue cells, &c., sometimes extending in nodular fashion into the liver substance, sometimes showing necrotic areas. In places the bile-ducts are somewhat dilated and surrounded by much fibrous tissue. Stained for tubercle bacilli vast masses of these were seen in the large caseated area containing the extravasated bile to one side of this extravasation and not near it. Only occasional tubercle bacilli were seen in the other necrotic foci. In another section similar large masses, visible with the low power, were present in a large degenerated area. No definite giant cells are present. The spleen shows scattered necrotic foci, with no special cellular reaction around or giant cells. The mesenteric glands show extensive degenerated areas, surrounded by plasma cells, lym-

phocytes, and connective tissue cells. No typical giant cells were seen, but occasional cells with two or several nuclei, apparently endothelial cells. Tubercle bacilli were easily found in the necrotic areas. The thickened patch in the caecum shows considerable infiltration with plasma and connective tissue cells and varying amounts of fibrous tissue. Tubercle bacilli were not seen. The large portal glands show in one section several necrotic foci without giant cells. Sections of two glands show a diffuse hyperplasia, the main mass of tissue being composed of cells with more protoplasm than lymphocytes, amongst which are some proliferating endothelial and connective tissue cells, often containing grains of blood pigment. Amongst this mass of cells are small clumps of lymphocytes. The lip lesion shows a necrotic surface with an absence of the surface epithelium, and a considerable round-celled chronic inflammatory reaction below. No giant cells or tubercle bacilli were seen. In the kidney, the cells of the convoluted tubules are unduly granular and the nuclei indistinct.

*Comments.*—The sequence of events in this patient is of very considerable interest. The nature and extent of the tubercular process in the abdomen indicates a duration of some months at least for the enlargement of the glands whilst the calcified area in one points to an infection contracted many months previously, perhaps years ago in childhood. Probably this initial focus had remained for long quiescent, but had begun to progress within the last year. It seems obvious that the patient must have gone on board ship after the tubercular process had reassumed activity. On the voyage she became ill with fever and prostration. The ankles swelled and bruises appeared on the shins, and she became anaemic. On admission to hospital her temperature was high ; she had no localising symptoms but presented the typical picture of aplastic anaemia. She steadily went down hill, and died with this diagnosis. Was the aplastic anaemia an independent condition, or was it due directly or indirectly to the tubercular process ? The patient obviously had a progressing tubercular process before she became definitely anaemic. At her death this process had extended so far that death from it alone could not have been long delayed. The aplastic anaemia also was so grave that death resulted, in great part at least, from the reduction in the number of red cells. If the two conditions were unassociated, it would be an unusual coincidence if two rather unusual pathological processes such as these, each at a stage tending to lead to the early death of the patient, were found together. It is probable then that the anaemia was associated in some way with the tuberculosis, or, to put it in other words, that the patient, at any rate at this period of her life, would not have developed aplastic anaemia had she not had the progressing tubercular infection.

#### Case 2.

##### GENERALISED TUBERCULOSIS WITH EXTENSIVE PUSTULAR DERMATITIS.

C. Turner, J. B. Cleland, and D. L. Barlow.

(Under the care of Dr. Harrold).

W.E., a male, *æt.* 40 years, married, a laborer, residing at Kangaroo Island ; was admitted on May 19th, 1921. He complained of a scabby rash, which had commenced 14 days previously, on the backs of the hands and the face. It was burning but did not itch. It came up in lumps first, which later developed yellow heads and then burst.

*On Examination.*—On the backs of the hands and extending up the backs of the forearms was a scabby rash and some pustules. The broken pustules had a phylectenular edge. On the face were similar lesions. Temperature normal, P. 80, R. 20.

On May 24th he was much improved. No more pustules had arisen. The lesions were treated with an ointment containing equal parts of boric acid and ammoniated mercurial ointments. By June 6th he was further improved. No fresh pustules had arisen, and he was desquamating on the backs of the hands. He was discharged on June 9th, 1921, practically well. He was readmitted on June 27th, 1921, in much the same condition as on his previous admission. Treatment was continued, but the condition became gradually worse. The lesions had extended up the arms to the face, back, and chest. The face was red and the eyelids swollen. There were some pustules on the scrotum, and the tissues of the scrotum were swollen and exuding a sticky fluid.

By September 14th his condition had become worse. The hands and forearms were raw and painful. The toes were also affected. The face and neck were cracked and covered with scabs. There

was a severe stomatitis (probably mercurial in origin from the use of Ung. Hydrarg. Ammon.). *Lotio plumbi subacetatis* was now being used, the scabs being previously removed after the use of olive oil.

September 20th, 1921.—The face had improved. The rash had spread to the back. The patient had an irritable cough with very little sputum. The temperature was hectic in type, rising to 100° to 101° F. at night and falling to normal in the mornings. Cultures from the exudate showed *Staphylococcus aureus*, a streptococcus, and a Gram-negative bacillus. A vaccine of *Staph. aureus* and the streptococcus was prepared, and administration commenced on October 4th. The rash had now spread over the back. The general condition of the patient was worse. The hands and feet were about the same. There was no improvement in the mouth condition. The scrotum was scabby and oedematous. There were fine rales posteriorly at both bases of the lungs.

October 11th, 1921.—He complained of dimness of vision in the right eye. The lids were swollen, and there was a free purulent discharge. Ophthalmoscopic examination showed the media hazy and the discs not visible. The rash had become generalised. The lesions had coalesced, producing large raw areas over which the superficial epidermis had been lost, and exuding a sticky fluid which, on drying, left a yellow crust.

On October 15th, 1921, baths of sodii bicarbonatis, one drachm to the pint, were commenced twice daily. This was done to remove scabs and cleanse the skin. The removal of scabs was a very painful and exhausting process. After two or three days on baths the skin was much cleaner of scabs. There were extensive areas of skin from which the epithelium was denuded, and which exuded a viscous fluid which stiffened the sheets. The general condition was poor. There was hectic fever and marked stomatitis, and the tongue was smooth and denuded of epithelium. The eyelids were swollen and exuding pus from the conjunctiva. He was coughing a good deal, and there was free yellowish sputum.

October 25th.—The rash was now universal and his condition weaker. He was taking no nourishment. The patient died on October 27th, 1921.

*Post mortem*, 173/21, on October 28th.—There were extensive skin lesions of a superficial dermatitic type with heaped up crusts; the fingers, toes, and scapular regions were most affected. The front of the neck about the clavicular areas was considerably involved and scattered lesions appeared in many other places. The lungs showed slight adhesions at the apices, and numerous rather firm shotty nodules throughout their substance. There were greatly enlarged hard glands about the bifurcation of the trachea and in the hilæ of the lungs, and enlarged glands in the superior and anterior mediastina. The heart showed no change of importance. In the abdomen there was an almost entire absence of omental and mesenteric fat. A caseous point, the size of a shot, was seen in the mesentery but no enlarged mesenteric glands though in the neighborhood of the pancreas, some lymphatic glands showed a fibrotic (apparently a tubercular) condition. The liver weighed 56ozs.; was rather pale, and showed a minute caseated area on the anterior surface of the right lobe and a number of scattered miliary tubercles. The spleen, weighing 6ozs., was dark red, and contained small white apparently fibro-caseous nodules scattered throughout its substance. The kidneys showed a few miliary tubercles. The suprarenal glands were large and firm. The stomach, intestines, prostate, and bladder showed no special changes.

*Histological Examination*.—The lung shows numerous thickened patches up to 2 to 3 mm. in diameter. In these are found fibro-caseous areas formed by the union together of affected alveoli and their walls. The alveolar walls apparently become thicker and more cellular whilst an exudate appears in the alveoli or the lining cells proliferate and, with some leucocytes and red cells, fill the spaces. In the older areas a degenerative change gradually ensues. In places there is a similar reaction and fibrosis around the bronchioles. Tubercular giant cells are not recognisable. Stained for tubercle bacilli, the caseated centre of a small nodule shows a number of scattered acid-fast bacilli. At the periphery, where there is a cellular reaction in the shape of polymorphonuclear leucocytes and mononuclear cells, acid-fast bacilli are exceedingly numerous, being mostly intracellular, apparently occurring in mononuclear cells and often grouped in bundles. In one of these areas the tubercle bacilli have so accumulated as to form huge red masses.

The liver shows a number of scattered caseated areas, from 142 $\mu$  to 500 $\mu$  in diameter, of which sometimes three or four may be seen in one field of a No. 3 objective. The centre of an affected area

shows a granular eosin-stained material. Sometimes in this the outlines of degenerating cells can be seen, and in places is an obscure reticular appearance probably due to fibrin. There are also elongated strands, usually short, somewhat suggestive of a mycelium but apparently only elongated degenerating fibroblasts. Occasionally a giant cell is seen. Two of these at the periphery of one area were typical, but the others were atypical of those of tuberculosis showing a number of nuclei distributed through the cell. Round the periphery of the area are some fibroblasts and rounded cells. The immediately surrounding liver substance shows some infiltration with rounded or irregular cells and occasional peripherally-situated liver cells show fat vacuoles. In one section an area, about 1.5 mm. in diameter, shows a laminated fibrosed periphery, against which the liver cells abut with little interstitial change, the centre of the area having fallen out, but showing calcified remains. A number of scattered acid-fast bacilli were seen in the caseous areas.

The spleen shows numerous caseated areas, up to 1 mm. in diameter. The outlines of degenerated cells can be seen sometimes throughout the nodules. Some of the Malpighian bodies are unaffected, although there may be fibrosis round the arterioles and caseated areas may be in their proximity. The splenic tissue between the nodules shows abundant blood-pigmentation. The capsule is somewhat thickened, and caseated areas may be seen just below it. A similar caseated nodule in the deeper part of the cortex of one of the suprarenal capsules shows scattered acid-fast bacilli. A mesenteric gland shows extensive caseated areas without giant cells, and with, in places, a number of distended capillary vessels in proximity to the caseated areas. Near the vessels are numerous cells with degenerating nuclei. Some of the cells seem endothelial and phagocytic. A bronchial gland shows very extensive capsulation with surrounding strands of fibrosis, but no giant cells. In both mesenteric and bronchial glands are some peculiar concentrically fibrosed areas. In one gland scattered tubercle bacilli are seen in the caseated areas. The small area in the mesentery shows also a caseated centre, with abundant broken down nuclear material at its periphery. The skin lesion shows thickening of the epithelium and separation of the superficial squamous part, but no marked reaction in the corium.

### Case 3.

#### ACID-FAST BACILLI ASSOCIATED WITH THE FORMATION OF LARGE ABSCESES, PYÆMIA AND DEATH.

By J. B. Cleland, L. B. Bull, and W. Christie.

(Under the care of Dr. Cudmore).

This case is, we believe, probably unique. The patient developed a large abscess with smaller secondary foci. These all contained vast numbers of an acid-fast bacillus. The cells in the pus were chiefly polymorphonuclear leucocytes. In spite of the large number of organisms present, toxæmia was not marked, death being more due to asthenia than to poisoning. The organisms were neither tubercle bacilli (negatived by the histological appearance and inoculation results) nor lepra bacilli (histological appearance, lesions in guinea-pigs). The disease was probably due to the accidental introduction of some normally saprophytic acid-fast organism, which in this patient was able to establish itself and become parasitic. The history of injury might suggest that such an organism, gaining entrance somewhere (perhaps by the alimentary canal), entered the blood stream and, becoming deposited in the injured tissue, there grew.

The details of the case are as follows:—Mrs. E.F., aged 60, was admitted to the Adelaide Hospital on May 4th, 1921, and died on June 16th. She gave a history of having fallen down a few steps about two months before her admission, when she slightly injured her right side. A week or two later she noticed a lump in her right side, which increased in size but did not cause much pain. About the same time a soft swelling developed over the upper part of her sternum, and on April 25th this burst, discharging some pus. The patient had had five children, all of whom were alive and healthy. On examination there was found an ulcer over the manubrium sterni which was circular with clean-cut edges which were slightly overhanging, and with some semi-fluid pus in its cavity. The margin was raised, red, and discolored for about a quarter inch all round. A large fluctuant swelling also existed between the crest of the right iliac bone and the costal margin, and extended from about the margin of the erector spinae to in front of the anterior

superior iliac spine. Some pus was aspirated from the abscess, and both it and the discharge from the ulcer were found to contain numerous acid-fast bacilli rather thicker than the *Bacillus tuberculosis*. These were for the most part lying free, but a few were found in polymorphonuclear leucocytes. Very few lymphocytes were noticed. The number of bacilli discharged from the ulcer continued to increase until on May 19th there were approximately 1,000 per field of vision. The vast majority of the cells continued to be polymorphonuclears, and the few mononuclears visible generally had the nucleus obscured by a dense mass of bacilli.

Inoculation experiments were made on one rabbit and three guinea pigs, the details of which are given further on. Culture experiments all failed, although every medium available in the laboratory was used.

The patient was X-rayed on May 6th, and some overgrowth at the hilum of the lungs was noticed. On May 10th a piece was cut from the margin of the ulcer, which showed granulation tissue but gave no evidence of any tubercular inflammation. The blood gave a negative Wassermann reaction. The discolored margin of the ulcer gradually extended till it was about an inch wide and became bluish-red in color and was steadily undermined. This undermining was most conspicuous towards the jugular notch, and by the 24th of May the insertion of the right sterno-mastoid was visible, and pus could be seen behind the manubrium. The patient gradually became weaker and died on June 16th.

*Post mortem* 91/21.—The general nutrition was fair. There was slight oedema of the feet. In the right loin was a large abscess cavity burrowing into the surrounding tissues and exposing the muscles, but not associated anywhere with the bone. Over the upper part of the sternum was a hole, 2in. in diameter, exposing the bone. There was no sign of reaction in the surrounding skin, and the ulcer had the appearance of having been cut out. The base was yellowish with necrotic material, and there was little sign of reaction. Small abscesses, about the size of small marbles, were found scattered in the subcutaneous fat of the trunk. The right lung showed a few old adhesions at the apex and some pigmented scarring; two small fibrotic nodules were present; there were no signs of abscesses. The left lung contained one or two fibrotic nodules. There was a small abscess surrounded by a ring of hyperæmia in the subpericardial tissue of the right ventricle. The omentum showed minute abscesses, with occasional surrounding reaction; other scattered abscesses were seen about the surface of the liver, in the mesentery, appendices epiploicæ, &c. The liver was congested, pale, and fatty, presenting a moderate nutmeg appearance with small whitish points, apparently necrosed areas. The stomach, intestines, and pancreas were normal. The spleen was enlarged, firm, with thickened patches on the surface, of medium dark color, and 6ozs. in weight. The left suprarenal gland had a small abscess in the cortex. Both kidneys showed some inflammatory adhesions of their capsules to the surroundings. There were a few small abscesses in the perirenal fat; on the surfaces of the organs were seen numerous small abscesses with a ring of hyperæmia to each; on section the cortex and medulla showed numerous small firm whitish areas from the size of a pin's head to one-eighth of an inch in diameter. The capsule was slightly adherent. Pus from the ulcer and large abscess both showed very numerous acid-fast bacilli rather thicker than ordinary tubercle bacilli, and showing less granular staining.

*Histological Examination.*—Sections of the large *abscess wall* show infiltration with some polymorphonuclear leucocytes and swollen connective tissue cells. Stained by Ziehl-Neelsen's method, vast numbers of acid-fast bacilli are seen in masses enclosed within cells. Some of the cells appear to be degenerating polymorphonuclear leucocytes, others are endothelial cells lining capillary walls, and still others appear to be connective tissue cells. The polymorphonuclear leucocytes form about half the cells in the degenerated areas.

The *spleen* shows numerous foci with degenerating cells, the remains of the cell bodies containing numerous acid-fast bacilli sometimes aggregated into dense red masses resembling the globi of leprosy. There is usually in the neighborhood of the foci a good deal of old blood pigment. The Malpighian bodies seem quite unaffected, but it is difficult to find a field with the  $\frac{1}{12}$  in. objective in the medulla which is free from acid-fast bacilli.

The *liver* shows considerable fatty infiltration. No definite necrotic areas were seen, but by appropriate staining scattered intracellular groups of acid-fast bacilli were met with, sometimes

apparently in cells in the capillaries, sometimes in the endothelia cells lining them, occasionally apparently actually in liver cells.

In the *kidney* necrotic foci in the cortex show numerous cells, many apparently polymorphonuclear leucocytes, containing masses of acid-fast bacilli which are present in vast numbers.

The pyæmic focus in the *pericardium* shows a necrosed area with scattered degenerated leucocytes and a few large connective tissue cells scattered in a rather granular and reticular ground substance of degenerated tissue. Even around the periphery, the polymorphonuclear cells are degenerated and on the outskirts the surrounding fat cells and connective tissue cells show enlargement, and there are a few plasma cells. After staining by Ziehl-Neelsen, extensive red areas are seen with a low power resolving themselves into vast masses of acid-fast bacilli which in the centre, in contrast to the periphery, are no longer contained within cells but lie free in a degenerated tissue.

A *mesenteric* focus shows degenerated polymorphonuclear cells intermixed with proliferated connective tissue cells in a degenerated matrix. In one place, in a small arteriole near a degenerated area, are several polymorphonuclear cells containing a number of acid-fast bacilli, these leucocytes being agglomerated together with some red cells. In the degenerated area itself are some masses of acid-fast bacilli, and also a large number of granular rods, not staining red, suggesting the presence of bacilli not, or no longer, acid-fast.

*Experimental Inoculations.*—One rabbit and one guinea pig were inoculated intraperitoneally and one guinea pig subcutaneously with pus from the patient. The guinea pig inoculated intraperitoneally died suddenly while being examined 10 days after inoculation. There was necrosis and pus formation in the abdominal wall at the site of inoculation, adhesions around liver and stomach, and the omentum was rolled and thickened. Acid-fast bacilli were found, mostly intracellular, in the pus from the lesions.

The rabbit developed a lesion in the abdominal wall at the site of inoculation. This broke down, and the discharge showed pus cells and acid-fast bacilli. The animal was killed four and a half months after inoculation. *Post-mortem* examination showed no lesions in the abdominal viscera (except cystic ovaries), but in the lungs small caseated areas in which acid-fast bacilli were present.

The guinea pig inoculated subcutaneously developed a local lesion, which broke down and discharged pus about four days after inoculation. There was no healing, and the lesion became more extensive. The animal died 37 weeks after inoculation. *Post-mortem* examination showed extensive areas of necrosis in the liver and numerous necrotic foci in the lungs and spleen.

A section of the ulcerated area of the *skin of the guinea pig* shows beneath the epithelium moderate cellular proliferation with, in places, light leucocytic infiltration. The proliferated cells appear to be chiefly endothelial and connective tissue.

Another guinea pig was inoculated subcutaneously with pus collected at autopsy on the patient. This animal developed a local lesion which discharged about four days after inoculation. It died 37 weeks after inoculation. It showed extensive areas of necrosis in the liver, spleen, and lungs, with small necrotic lesions in the heart and necrotic precrural and iliac lymphatic glands.

Acid-fast bacilli were not found in smears made from the necrotic lesions of either guinea pig, but in sections they were found to be present, although in very small numbers. Histological examination of the discussed tissues showed a chronic inflammatory reaction with fibrosis, polymorphonuclear invasion, round cell accumulation, and extensive areas of coagulation necrosis. The blood vessels often showed thrombosis, and it appears that the necrosis was due to the vascular changes. There was little or no endothelial reaction, and only one multinucleated cell resembling an imperfect giant cell was seen. The reaction did not resemble a tubercular reaction in any of the sections.

### III.—CICATRICIAL PYLORIC ULCER FOLLOWING INGESTION OF HYDROCHLORIC ACID.

Notes by Dr. C. Turner.

(Under the care of Dr. Corbin).

J.K.M., a male, *æt.* 28, was admitted on November 5th, 1921. One hour previously to admission he had swallowed about a dessert-spoonful of hydrochloric acid (spirits of salts) and immediately felt a burning in the throat and soreness in the epigastrium, which became worse. Fifteen minutes afterwards he began to vomit a black frothy

fluid. On admission he was given an alkaline fluid to drink, in the form of bicarbonate of sodium, and was put on a milk diet. He had had a "cold" for 10 days prior to admission, and was expectorating some yellow lumpy sputum. There was no loss of weight or night sweats. Examination of the chest was negative. He had some tenderness in the epigastrium for a few days, but was discharged 14 days after admission feeling well and taking light food without discomfort. He was re-admitted on December 2nd, 1921, complaining of pain, coming on after food, followed by vomiting, with relief of the pain. He was unable to retain any food for a longer period than two hours. He was losing much weight and getting very weak. He was very tender in the epigastrium. A barium meal on December 13th, 1921, showed a complete pyloric obstruction. He vomited the barium one hour after the screening. The general condition was considerably lowered. He had obviously wasted and lost color. Diacetic acid was found in his urine. It was decided to operate on December 14th. A supraumbilical mid-line incision was made under ether. A condition of cicatricial ulcer encircling the stomach at the pyloric end was found. A posterior gastroenterostomy was performed. He was discharged on January 13th, 1922, feeling well and taking a full diet. On January 27th, 1922, he had put on 6lbs. in weight.

#### IV.—RODENT ULCERS IN UNUSUAL SITUATIONS.

By L. B. Bull.

The routine histopathological examinations made during the year 1921 revealed two cases of rodent ulcer in unusual situations. One case was under the care of a private practitioner, and clinical notes are unobtainable. The rodent ulcer was situated in the skin of the ankle. We have no further information. Sections of the ulcer revealed a typical picture with nothing unusual.

The other case was admitted to the hospital. The patient was an unmarried woman, sixty years of age. She had had an ulcer of the right loin for 10 years, and at the time of examination it appeared as a large circular ulcer about 6in. in diameter, with a thick indurated edge. It was of the superficial type, and sections show a typical picture. The patient refused operation, and was treated with X-rays for some time without any benefit.

During the year 686 specimens were submitted to histological examination, mostly representing neoplasms or suspected tumours. Of these 36 were rodent ulcers representing 34 individual cases. Only in the two cases mentioned above were the rodent ulcers found in unusual situations.

#### V.—SQUAMOUS EPITHELIOMA OF THE LIP IN A MAN, AGED 24 YEARS, FOLLOWING TRAUMA.

By H. R. Branson.

(Under the care of Dr. Cudmore).

Male, *aet.* 24, single, a laborer, was admitted on January 4th, 1921. He had been struck on the lower lip about 10 weeks previously by a football. The lip had been split and had then scabbed over. He had picked the scab off several times. Gradually a lump formed

which increased in size until it reached the diameter of a marble. It was not painful.

On examination, a lump (about the size of a marble) with a scab on its surface was present near the middle of the lower lip. On handling the scab a slight amount of pus escaped from a crack on its surface. The lump was hard to the touch, but the hardness did not extend deep into the tissues of the lip. There was some tenderness on pressure. No enlarged glands were felt in the neck. A portion of the growth was excised and proved to be squamous epithelioma. On January 7th the growth was removed by a V-shaped incision. The glands and all the lymphatic and cellular tissues were removed from the anterior triangle of the neck on both sides. The growth was again examined, and was found to be a squamous epithelioma, with cell nests and some plasma cells. No secondary deposits were found in the glands.

#### VI.—EXTREME ADIPOSITY ASSOCIATED WITH A CYST OF THE PITUITARY BODY IN A MIDDLE-AGED WOMAN.

By D. L. Barlow.

(Under the care of Dr. de Crespigny).

A married woman, *aet.* 57, was admitted to hospital on August 24th, 1921, suffering from broncho-pneumonia, which had commenced with symptoms of a common cold a few days earlier. She rapidly became worse, and died on August 26th. Her appearance was remarkable, as she presented a picture of very extreme adiposity. The regions of special accumulation were the subcutaneous abdominal tissues, mammae, and buttocks, but the limbs were of enormous girth. A large ventral hernia was present. The features were coarse and blunted, the face being fat, and there was a well-marked moustachios and some coarse hairs on the lower lip. Both legs below the knees were considerably pigmented, but no large varicose veins were present.

At the autopsy, the lungs presented the characteristics of an acute widespread broncho-pneumonia. The heart was enlarged from fatty accumulation. A very large ventral hernia was present, being due to stretching of an operation scar. The omenta, mesentery, etc., contained very large accumulations of fat. The brain appeared normal. The sella turcica was expanded to a diameter of approximately 2 cm. and the bony walls were thinned. Almost the whole of this space was occupied by a cyst which ruptured in getting out the pituitary body, and was found to contain clear watery fluid. The pituitary gland was represented by two lateral pieces of yellowish tissue corresponding in appearance to the anterior lobe of the normal pituitary gland. Elsewhere the cyst was bounded by thin membranous walls, and to the upper portion of these was attached a stalk from the mid-brain. Microscopically the glandular tissue was found to have the normal structure of the anterior lobe.

The history of the general condition was meagre on account of the patient's serious condition, but it showed that she had been becoming grossly fat for 20 years, but had felt fairly well. Her eyesight was good. MacCallum, in his excellent Text Book of Pathology, depicts a similar case during life which was regarded as being due to a tumor or cyst diminishing the function of the pituitary gland.